

NATURAL RESOURCES AND CONSERVATION



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FINAL ENVIRONMENTAL ASSESSMENT

Project Name:	Paradise Valley Irrigation District Milk River Bank Stabilization
Proposed Implementation Date:	Summer 2023
Proponent:	Paradise Valley Irrigation District
Location:	48.57443, -109.067919
County:	Blaine County

I. TYPE AND PURPOSE OF ACTION

The purpose of the project is to protect public health and safety for users of the Milk River and mitigate further erosion along the riverbank in the project area, protecting the Sprinkler Lateral irrigation system. The Paradise Valley Irrigation District (PVID) is part of the Milk River Irrigation Project which spans multiple counties in Montana. The Sprinkler Lateral is one component of the PVID, located along the south side of the Milk River, approximately seven miles Southeast of Chinook. The lateral services approximately 1,080 acres of farmland and is a critical component of irrigation to land south of the Milk River (hereby referred to as River).

The Lateral runs approximately 25 to 30 feet from the existing edge of the riverbank with an access road as the only separation between the River and the Lateral. The section of riverbank this project is focused on is approximately 600 feet, along the south side of the Milk River. If erosion along this bank of the River is left unchecked, channel migration will eventually washout the Lateral and existing access road.

PVID, working in coordination with the local NRCS and DNRC, have identified the existing riverbank location as a crucial site for rehabilitation. The main priority for the PVID is to preserve water quality, improve management of the water resource, improve fishery habitat, protect the Sprinkler Lateral from erosion, and ensure continued water supply to irrigated land in the area.

Inspection and site photos have shown that channel migration has occurred for years and has accelerated in recent years. At this point nearly 0.2 acres have been lost due to river migration. The losses caused by unmitigated erosion and channel migration could reach over \$434,160 in crop production losses each year. Installation of the proposed improvements will eliminate channel migration, preserve existing infrastructure, improve water resource management, and preserve water quality in the Milk River.

The Scope of Work for the project includes design of a root wad bank stabilization structure, permitting for regulatory compliance, final design and advertisement of project for bidding, construction and construction inspection, excavation and grading of riverbank, installation of root wads and proper anchoring, and final inspection and construction close-out.

The Milk River – Bank Stabilization Project will improve water conservation and management as

well as preserve water quality in the Milk River. Implementation of the project will safeguard existing revenue generation within the District for over 1,000 acres, improve water quality by reducing sediment loading in the Milk River, improve fishery and wildlife habitat through stabilization of the riverbank, and will ultimately benefit the local and state economies.

The project is funded by a grant from the DNRC Renewable Resource Grant and Loan Program (RRGL), The American Plan Rescue Act (ARPA), and PVID.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project. List number of individuals contacted, number of responses received, and newspapers in which notices were placed and for how long. Briefly summarize issues received from the public.

Ongoing communication has occurred between the PVID, Department of Natural Resources and Conservation (DNRC), DNRC Conservation and Resource Development Division (CARDD), US Army Corps of Engineers (USACE), Blaine County Conservation District, and other local government entities. As of February 23, 2023, the 10-day comment period concerning the project with the EPA had passed and there were no comments.

The project has been presented at local meetings and made available for public comment. Additionally, the applicant has provided several letters from regulatory agencies including:

- A support letter from the Blaine County Conservation District, dated May 19, 2020;
- A letter from the State of Montana indicating the project was awarded a 2021 Renewable Resource Grant, dated June 21, 2021;
- An email letter indicating that the project was submitted to the Montana Sage Grouse Habitat Conservation Program, dated December 9, 2021; and,
- A letter from the USACE, dated December 8, 2022, indicating that the project did not require DA authorization pursuant to Section 404 of the Clean Water Act (CWA) as it is exempt from regulation under the Section 404(f) exemptions found at 33 CFR Part 323.4(a)(1), construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance (but not construction) of drainage ditches. Discharges associated with siphons, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant and functionally related to irrigation ditches are included in this exemption.

DNRC will post a draft of this Environmental Assessment for public comment for 30 days on the DNRC – Public Notices webpage. In addition, the MEPA Coordinator will provide a letter of notice for public comment to the applicant for posting in a local newspaper or website outlet.

For any comments submitted by the public, the MEPA Coordinator will review and work with the Grant Manager and applicant to adequately address those comments.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

Examples: cost-share agreement with U.S. Forest Service, 124 Permit, 3A Authorization, Air Quality Major Open Burning Permit.

DEQ has jurisdiction over the public water supply and compliance of this project and DEQ approval of plans and specifications of the project is pending, but DEQ has indicated approval is imminent.

3. ALTERNATIVE DEVELOPMENT:

Describe alternatives considered and, if applicable, provide brief description of how the alternatives were developed. List alternatives that were considered but eliminated from further analysis and why. Include the No Action alternative.

Alternative 1 – No Action

Alternative 1 would analyze the results of taking no action and continuing to operate the Sprinkler Lateral in its current condition. The Milk River would continue to migrate closer to the delivery system. The possibility of washout is the major risk to the lateral failure. According to the Preliminary Engineering Report (PEP) (Performance Engineering 2020), irrigators using the PVID facilities would lose up to \$434,160 in potential revenues annually in the event of a washout and the elimination of the current water supply along the Sprinkler Lateral.

The No-Action Alternative would continue to irrigate the 1,080 acres currently served by the canal until washout occurs. However, this alternative would not contribute to the conservation, management, development, and/or the preservation of the water resources in PVID and Milk River Basin.

Alternative 2 – Rip Rap Bank Stabilization

Alternative 2 involves the stabilization of 600-ft of bank along the Milk River using rip rap reinforcement and would involve excavating the existing riverbank to create adequate slope to provide a stable foundation for the riprap installation. Material will be sized to withstand the 100-yr flood event, following USCOE guidelines. All excess material generated from re-sloping of the bank will be hauled from the site. Rip rap would be pulled from a local quarry and installed through machine placement along the re-sloped embankment. Rock placement will extend into the river creating fisheries habitat along the project site.

Alternative 2 will meet all the goals and objectives set forth in section 3.0 of the PEP. The alternative will help improve water management while utilizing the existing infrastructure, preserve the ability of using the current water resource (Sprinkler Lateral) and provide water for the PVID delivery system as well as help to preserve the water quality and public safety near eroding slopes.

Alternative 3 – Root Wad Bank Stabilization (Preferred)

Installation of root wads for bank stabilization as Alternative 3 would involve the excavation and grading of the existing riverbank, installation of root wads into the riverbank, proper anchoring of the root wads and stabilization of the remaining riverbank above the root wads using rip rap. Root wad stabilization utilizes a “softer” version of bank armoring with native materials to achieve the same result as Alternative 2. Root wads will also create a beneficial habitat within the river for wildlife and the fishery. The installation of root wads would effectively minimize erosion and channel migration while providing natural habitat for the existing ecosystems. Approximately ten

(10) root wad structures will be added 60 feet apart along the 600 feet of proposed bank stabilization.

Alternative 3 will meet all the goals and objectives set forth in section 3.0 of the PEP. The alternative will help improve water management while utilizing the existing infrastructure, preserve the ability of using the current water resource (Sprinkler Lateral) and provide water for the PVID delivery system, improve the natural habitat as well as help to preserve the water quality and public safety near eroding slopes.

Alternative 4 – Bendway Weir Installation

Alternative 4 involves the installation of bendway weirs for flow deflection and would involve the excavation and grading of the existing riverbank, installation of bendway weirs in the river as well as rip rap installation to stabilize the riverbank. The installation of bendway weirs would help to redirect flow away from the eroded riverbank, but would not offer any bank stabilization, thus requiring additional rip rap bank stabilization to mitigate existing erosion. Weirs would protrude out into the main channel of the river at least 25 feet and be at least 12 feet wide in order to provide access to the weirs for construction and repairs. There would be approximately six (6) weirs spaced 100 feet apart along the 600 feet of the proposed bank stabilization. More extensive in river work will be required to accomplish this alternative.

Alternative 4 will meet all the goals and objectives set forth in section 3.0 of the PEP. The alternative will help improve water management while utilizing the existing infrastructure, preserve the ability of using the current water resource (Sprinkler Lateral) and provide water for the PVID delivery system as well as help to preserve the water quality and public safety near eroding slopes.

Selection of Preferred Alternative – Alternative 3 (Root Wad Bank Stabilization)

After comparing the cost/benefit analysis, environmental impacts, and the renewable resource impacts, and operational considerations it was determined that Alternative 3, Root Wad Bank Stabilization, would best accomplish the project goals and objectives. Alternative 4 meets all the project goals but requires a significantly larger investment upfront with less environmental benefits. As a result, Alternative 3 was selected as the Preferred Alternative, preserving the existing access road and irrigation infrastructure and the ability to continue supply of water to the Sprinkler Lateral delivery system within PVID. The proposed alternative will benefit the local economy by preserving PVID’s ability to supply water for agriculture production that has an estimated value of \$434,160 annually and \$4.9M over the 20-year design life of the project. Further details regarding the assessment of the alternatives and selection of the preferred alternative are provided in the PEP.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT
<ul style="list-style-type: none">• <i>RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.</i>• <i>Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.</i>• <i>Enter “NONE” If no impacts are identified or the resource is not present.</i>

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify direct, indirect, and cumulative effects to soils.

The project area is located along the right (south) bank of the Milk River. The NRCS Web Soil Survey indicates that the soil near the project area consists of approximately: 56.4% Havre loam, 28.7% Glendive fine sandy loam, and approximately 7 percent or less each of Harlem silty clay loam, Harlem loam, and Harlem silty clay. Within the embankment, the soil is mostly comprised of Havre loam and Glendive fine sandy loam.

Glendive fine sandy loam is considered a Hydrologic Soil Group B and is well drained with a moderately high to high capacity to transmit water. Harlem loam is considered a Hydrologic Soil Group B and is well drained with a moderately low to moderately high capacity to transmit water. Harlem silty clay loam is considered a Hydrologic Soil Group C and is well drained with a moderately low to moderately high capacity to transmit water. Harlem silty clay is considered a Hydrologic Soil Group C and is well drained with a moderately low to moderately high capacity to transmit water. Havre loam is considered a Hydrologic Soil Group B and is well drained with a high capacity to transmit water. Glendive fine sandy loam is moderately corrosive to concrete, and Havre loam has low corrosivity to concrete. Glendive fine sandy loam is moderately corrosive to steel and Havre loam is highly corrosive to steel. Glendive fine sandy loam farmland of statewide importance and Havre loam is not prime farmland.

The Montana Bureau of Mines Geologic Map of the Havre 30' x 60' Quadrangle, North-Central Montana (Scholes and Bergantino 2002) indicates that the project is located on Quaternary alluvium (Qal). Qal is described as "Deposits of modern streams and associated flood plains; includes colluvium, and modern terrace deposits; locally includes some slightly older Holocene terrace alluvium. Thickness not measured."

Proposed Alternative – Direct, beneficial impacts to soil quality, stability, and moisture. The project proponent will restore any areas disturbed during construction to their preconstruction conditions, except for where the root wads are installed. Soil erosion will be protected by placement of the root wads and rip rap above the root wads, and roots will provide other beneficial effects to soil quality such as nitrogen fixation and absorption of phosphorus, and slope stabilization.

No Action – Potentially direct, adverse, minor to moderate, short- to long-term, local, recurring impacts to soil stability due to further erosion of the embankment.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify direct, indirect, and cumulative effects to water resources.

The current condition results in moderate impacts to water quality through erosion of the riverbank, which carries this sediment-loaded water to the Milk River. The Milk River is an impaired river system. The floodplain of the Milk River at this location is currently an approximate Zone A floodplain. Shallow groundwater aquifers exist in the project area.

Proposed Alternative – Potentially direct and indirect, beneficial impacts to water quality, quantity, and distribution. Project will significantly reduce contaminants entering the water supply and preserve aquatic habitat and recreational opportunities to the river. No groundwater impacts are expected.

The proposed project construction will have no impact on the floodplain as the proposed improvements will be installed at or below the existing grade of the ordinary high-water mark. A floodplain permit may be required. The PVID will work with the Engineer, the Blaine County Floodplain Administrator and the DNRC Floodplain Program to determine floodplain permit requirements.

Any necessary stormwater discharge for the project will be covered under an MPDES Construction General Permit (CGP) and a Stormwater Pollution Prevention Plan (SWPPP), and the appropriate permits for working in and around the floodplain or State Waters will be acquired as needed.

No Action – Potentially direct and indirect, adverse, moderate to major, short- and long-term, local and regional impacts to water quality, quantity, and distribution. Contaminants may continue to enter the river, the embankment may continue to erode and destabilize, increasing turbidity and contributing negatively towards total maximum daily loads.

6. AIR QUALITY:

What pollutants or particulate would be produced (i.e. particulate matter from road use or harvesting, slash pile burning, prescribed burning, etc)? Identify the Airshed and Impact Zone (if any) according to the Montana/Idaho Airshed Group. Identify direct, indirect, and cumulative effects to air quality.

The proposed project is not located in an air quality Attainment Area, as set by the U.S. Environmental Protection Agency's National Ambient Air Quality Standards. The project area is not listed as impaired in air quality particulates per the Montana DEQ Air Quality Nonattainment Status list (Montana DEQ Air Quality Website visit).

Proposed Alternatives - Potentially direct, adverse, minor, short-term, local impacts to air quality as there may be some dust introduced to the environment from construction activity and/or exhaust fumes from operation of heavy construction equipment. The contractor will need to provide dust control measures.

No Action - No impacts to air quality.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify direct, indirect, and cumulative effects to vegetation.

The project area is surrounded by private land, primarily within Human Land Use (58%; 57% of which is Agricultural), Wetland and Riparian Systems (31%), Grassland Systems (6%), Recently Disturbed or Modified (3%), and Shrubland, Steppe and Savanna Systems (1%; see Montana Natural Heritage Program report at the end of this document to view other land cover types, or the MTNHP website). There are six plant Species of Concern listed for Blaine County that may potentially occur within the project area (Montana Natural Heritage Program website).

The project area is located within land classified as riverine by the National Wetlands Inventory. Vegetation along the project area is mostly grasses, sedges, and brush, with some trees south of the

project area. Farmland and agricultural land surround the river and project area to the west, south, and east. No areas of critical environmental habitat exist in the project area. No mapped Freshwater Emergent Wetlands are located in the project area. The USDA NRCS Web Soil Survey shows that some of the soil in the project area is classified as soils of Statewide Importance.

The project will re-establish existing wetland conditions with the same wetland type.

Proposed Alternatives – Potentially beneficial impacts to vegetation cover, quantity, and quality. The project will stabilize the embankment and promote vegetative growth. Efforts should be made to preserve existing vegetation where applicable. BMPs should be installed and monitored per the MPDES CGP and SWPPP, and other required permits. Longer-term measures for mitigation of impacts include topsoil placement, revegetation/seeding, and others. The PVID and its Engineer will work closely with the USACE for permitting of the project.

No Action – Potentially direct, adverse, minor to moderate, short- to long-term, local, recurring impacts to vegetation cover, quantity, and quality. Continued erosion of the riverbank will result in a loss of vegetation cover, quantity, and quality.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify direct, indirect, and cumulative effects to fish and wildlife.

Project location is identified as a priority area for terrestrial conservation efforts within the Montana State Wildlife Action Plan (SWAP; Milk River Terrestrial Focal Area; Montana Fish, Wildlife, and Parks web map GIS data) as well as for aquatic conservation efforts. The Milk River is considered Tier 1 Priority with the SWAP for watershed aquatic focal areas (Milk River Focal Area). The project area exists within Montana Sage Grouse habitat (EO Habitat Class: EO-General Habitat) but does not occur within core or connectivity areas (see attached map; Montana Sage Grouse Habitat Conservation Plan web mapping tool). According to the FWS, no critical habitat exists within the project. The project exists within a riverine system. Emergent wetlands exist near the project, but not within the proposed construction limits of the project.

Records from the Montana Natural Heritage Program (MTNHP) for species occurrences indicate there are species of concern in and around the project region including: Northern Pearl Dace (*Margariscus nachtriebi*), Iowa Darter (*Etheostoma exile*), Northern Redbelly Dace (*Chrosomus eos*), Sauger (*Sander canadensis*), Brassy Minnow (*Hybognathus hankinsoni*), Brook Stickleback (*Culeae inconstans*), Burbot (*Lota lota*), Plains Minnow (*Hybognathus placitus*), Creek Chub (*Semotilus atromaculatus*), Bald Eagle (*Haliaeetus leucocephalus*), Bobolink (*Dolichonyx oryzivorus*), Great Blue Heron (*Ardea herodias*), Hoary Bat (*Lasiurus cinereus*), and Little Brown Myotis (*Myotis lucifugus*). Important animal habitat includes non-cave bat roosts. MTNHP records indicate 82 other observed and potential animal and plant species of concern and potential species may exist in the area (see attached MTNHP report).

Proposed Alternatives – Potentially direct, adverse, negligible to minor, short-term, local, non-recurring impacts to terrestrial, avian, and aquatic life and habitats during construction. After completion of construction, direct, beneficial impacts to terrestrial, avian, and aquatic life and habitats. Restoration of the riverbank and wetlands may provide improvements to terrestrial, avian, and aquatic life and habitats.

No Action – Potentially direct and indirect, adverse, negligible to moderate, long-term, recurring local impacts to terrestrial, avian, and aquatic life and habitats. Continued erosion of the riverbank may harm terrestrial, avian, and aquatic life and habitats.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify direct, indirect, and cumulative effects to these species and their habitat.

The National Wetlands Inventory (NWI) website was used to determine whether any wetlands were present within the lands adjacent to the project location (map included at the end of this EA). This search indicated that three types of wetlands are present within and adjacent to the project area, all of which are riverine habitats. Riverine habitats are generally deepwater habitats contained within a channel, permanently flooded, with intermittent and seasonally flooded channels. The project exists within a riverine system. Emergent wetlands exist near the project, but not within the proposed construction limits of the project.

As mentioned in the previous section, there are 96 species of concern listed as present or potentially using the Milk River area as viable habitat. DNRC also used the U.S. Fish and Wildlife Service IPaC tool to generate a resource list summarizing any endangered or threatened species that are known or expected to be near the project area. The IPaC list generated one (1) Federally listed species as potentially occurring in the greater project area, monarch butterfly (*Danaus plexippus*), and nine (9) migratory bird species: Baird's Sparrow (*Ammodramus bairdii*), Bobolink (*Dolichonyx oryzivorus*), Chestnut-collared Longspur (*Calcarius ornatus*), Franklin's Gull (*Leucophaeus pipixcan*), Lesser Yellowlegs (*Tringa flavipes*), Long-billed Curlew (*Numenius americanus*), Marbled Godwit (*Limosa fedoa*), Sprague's Pipit (*Anthus spragueii*), and Willit (*Tringa semipalmata*; USFWS IPaC Mapping tool, report attached). The nine bird species are protected under the Migratory Bird Treaty Act, and the Bald Eagle is also protected under the Montana Bald Eagle Management Plan, Bald and Golden Eagle Protection Act, and Lacey Act.

Proposed Alternatives – Potentially direct, adverse, negligible to minor, short-term, local, non-recurring impacts to unique, endangered, fragile, or limited environmental resources exist for the project. Efforts should be made to preserve existing vegetation where applicable, and disturbance of wetland habitat should be avoided. BMPs should be installed and monitored per the MPDES CGP and SWPPP, and any other permits.

No Action – Potentially direct and indirect, adverse, negligible to moderate, long-term, recurring local impacts to unique, endangered, fragile, or limited environmental resources. Continued erosion of the riverbank may harm existing habitat.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine direct, indirect, and cumulative effects to historical, archaeological or paleontological resources.

No cultural or historical sites are expected to be within the construction extent for the project. The project proponent has not implemented a cultural survey. The Montana State Historic Preservation Office (SHPO) indicates there are no National Register Historic Properties and Districts within 1/2-mile of the project.

Proposed Alternatives & No Action - No cultural or historical resource impacts are anticipated. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify direct, indirect, and cumulative effects to aesthetics.

The project is visible to local property owners. Temporary impacts to noise from construction equipment will occur. In some cases, visual quality and aesthetics may be improved from planned activities for the project. Limited noise will occur during the 3-month construction phase of the project.

Proposed Alternatives – Potentially indirect, negligible to minor, short-term, local, non-recurring impacts to aesthetics during construction; direct impacts may be beneficial. Indirect, adverse nuisance impacts from heavy construction equipment will be temporary during the project and may include noise and exhaust fumes. Noise mitigation techniques to minimize impacts to the surrounding areas will be used by the contractor whenever possible. Restoration of the riverbank may offer some enhancements to the visual quality and aesthetics of the area.

No Action – Potentially direct, adverse, negligible, long-term, local, recurring impacts to aesthetics. Continued erosion of the riverbank may pose visual cumulative impacts to aesthetics.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify direct, indirect, and cumulative effects to environmental resources.

The current condition has no effect on energy resources. No additional resources are expected to be used.

Proposed Alternatives and No Action – No impacts to demands on environmental resources of land, water, air, or energy. The project is not anticipated to have impacts on energy consumption or conservations, and/or solid waste.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

The consultant has provided a completed DNRC Environmental Checklist and indicated they possess several Agency Comment letters, as previously referenced. They also provided additional reports and figures listed below.

- Performance Engineering. 2020. Paradise Valley Irrigation District, Milk River – Bank

Stabilization Project, Preliminary Engineering Report. May 2020.

- Pierce, R. 2019. Irrigation Assessment Report. Oxbow Engineering LLC.
- USDA NRCS. 2020. Custom Soil Resource Report for Blaine County and Part of Phillips County Area, Montana. May 8, 2020.
- WWC. 2022. Paradise Valley Irrigation District, Milk River Bank Stabilization, Proposed Cross Section, Blaine County, Montana. February 2, 2022.
- WWC. 2022. Paradise Valley Irrigation District, Milk River Bank Stabilization, Control Abstract, Blaine County, Montana. August 15, 2022.
- WWC. 2022. Paradise Valley Irrigation District, Milk River Bank Stabilization, Site Map, Blaine County, Montana. October 4, 2022.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

The current condition of the project area is eroded riverbank which has a steep, nearly vertical cliff face, and poses a threat to recreational users in the river if they get too close to the bank and it were to collapse. Additionally, recreationists standing on the riverbank could be harmed if the bank were to collapse.

Proposed Alternatives – Potentially direct and indirect, adverse, minor, short-term, non-recurring local impacts to human health and safety. Heavy equipment would be used during construction of the proposed repairs and modifications to the system. Operation of heavy equipment poses a potential threat to public safety. There should be no impact during construction, but the typical risk to the public's safety may be increased during construction. BMPs should be installed to protect the public from the working construction extents. Restoration of the riverbank will provide direct and indirect, beneficial impacts to protect the recreationists. This project does not involve activities related to lead-based paint and/or asbestos.

No Action – Potentially direct, adverse, moderate to major, short- to long-term, local, recurring impacts may occur to human health and safety. Continued erosion of the riverbank may pose a threat to human health and safety.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

There are no commercial or industrial facilities within the project area, but agricultural activities and production do exist nearby to the project area. The current condition impacts downstream agricultural lands and production as this portion of the Sprinkler Lateral system is in danger of being washed out by the Milk River, which would eliminate water delivery to over 1,080 acres of irrigated land. The primary crops grown on the acres served by the Sprinkler Lateral are alfalfa hay

(810 acres; value of \$134.00 per ton, average of 4 tons per acre) and small grains (270 acres, value of \$5.30 per ton, average of 90 tons per acre). The calculated value in the PER over the 20-year design lifespan for the project is \$4,979.815.00.

Proposed Alternatives – Potentially direct, beneficial impacts to agricultural activities and production. Restoration of the riverbank will be protective of the Sprinkler Lateral system.

No Action – Potentially direct and indirect, adverse, moderate to major, short- to long-term, local, recurring impacts may occur to agricultural activities and production. Continued erosion of the riverbank could damage a portion of the Sprinkler Lateral system and cutoff resources to approximately 1,080 acres of irrigated land, limiting activities and production.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify direct, indirect, and cumulative effects to the employment market.

The population for Blaine County was 6,980 in 2021, with 1,175 people residing in Chinook City, the nearest population center to the project area (Montana Department of Commerce: Census and Economic Information Center). The project area is adjacent to primarily agricultural land and is in a generally rural area, outside of any municipalities. Farmers in the area depend on the Sprinkler Lateral system for irrigation purposes.

Proposed Alternatives – Potentially direct and indirect, beneficial impacts to quantity or distribution of employment. The construction of the project may bring local job opportunities that were not previously present. The failure of the Sprinkler Lateral system may adversely affect farmers and their crop yields.

No Action – Potentially direct and indirect, adverse, minor to major, short- to long-term, local, recurring impacts to quantity or distribution of employment. If the Sprinkler Lateral system were to fail, local farmers may suffer losses to crop yields resulting in reduced income, a possibly a reduction in employment.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify direct, indirect, and cumulative effects to taxes and revenue.

The current condition provides irrigation to nearby farms and agricultural land, which provides local and state tax base and tax revenues through crop yields.

Proposed Alternatives – Potentially direct and indirect, beneficial impacts to local and state tax base and revenues. A larger, more sustainable annual crop production will result from the proposed improvements. Additional crop revenue will increase tax revenue that will be seen at both the local and state levels.

No Action – Potentially direct and indirect, adverse, moderate to major, short- to long-term, local, recurring impacts to local and state tax base and revenues. Failure of the Sprinkler Lateral will result in reduced crop yields and revenue and will decrease tax revenue at both the local and state levels.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify direct, indirect, and cumulative effects of this and other projects on government services

No changes are necessary to traffic patterns, fire protection, police, schools, or other government services.

Proposed Alternatives – Potential indirect, beneficial impacts to demand for government services. Additional tax revenue may provide indirect benefits to local schools, health and medical services and facilities, parks, playgrounds, and open spaces.

No Action – No impacts on demand for government services.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, Town, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

The current condition limits land use compatibility through the continued erosion of the riverbank. The erosion threatens to migrate into the Sprinkler Lateral which would fail and leave 1,080 acres downstream of the project area without water for irrigation. The proposed project will stabilize the existing riverbank and provide a reliable water supply to water users served downstream, comply with all local ordinances, resolutions, or plans in design and construction, and will not result in regulatory action on private property rights.

Proposed Alternatives – Potentially direct, beneficial impacts to locally adopted environmental plans and goals. Restoration of the riverbank will provide stability to the irrigation system.

No Action – No potential impacts to locally adopted environmental plans and goals.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify direct, indirect, and cumulative effects to recreational and wilderness activities.

The current condition allows for the continued erosion of the south bank of the Milk River, which impacts recreational use of the river. The project is not located in or on a designated Wild & Scenic River or Wilderness Area.

Proposed Alternatives and No Action – No direct impacts to access to and quality of recreational and wilderness activities. The preferred alternatives will not impact access to public lands, waterways, or public open spaces.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify direct, indirect, and cumulative effects to population and housing.

Property adjacent to the project area is reportedly used for grazing and irrigated land, with minimal residential properties listed. The land used within the project area is anticipated to have limited growth expected in the future.

Proposed Alternatives and No Action – Potentially no impact as the proposed riverbank restoration is not expected to cause any changes in population demographics or housing conditions.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

Blaine County is largely made up of rural, cultivated cropland and/or Great Plains mixedgrass prairie (Source: Montana Natural Heritage Program). The agricultural way of life provides the most common type of lifestyle/community for the county. Social conduct, structures, and behaviors follow conventions that are typical of agricultural land.

Proposed Alternatives and No Action – No impacts or changes to social structures are expected to occur.

23. CULTURAL UNIQUENESS AND DIVERSITY:

How would the action affect any unique quality of the area?

There are no unique facilities of unique culture or diversity in the project area.

Proposed Alternatives and No Action – The proposed project is not expected to affect any cultural facilities.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify direct, indirect, and cumulative economic and social effects likely to occur as a result of the proposed action.

The median household income in the past 12 months (in 2021 inflation-adjusted dollars) in Chinook, MT was \$43,400. Most residents earn between \$29,772 and \$57,028.

Proposed Alternatives – Potentially direct and indirect, beneficial impacts to appropriate social and economic circumstances. Restoration and repair of the riverbank will be protective of the irrigation system and may improve crop yields. Additionally, workers and materials required for the construction of the project may temporarily provide beneficial impacts to local businesses throughout construction.

No Action – Potentially direct and indirect, adverse, minor to major, short- to long-term, recurring local impacts may include a loss of potential revenue for residents if the irrigation system were to fail.

25. DRINKING WATER AND/OR CLEAN WATER

Identify potential impacts to water and/or sewer infrastructure (e.g., community water supply, stormwater, sewage system, solid waste management) and identify direct, indirect, and cumulative effects likely to occur as a result of the proposed action.

The project does not affect community water supply, wastewater treatment, solid waste management, or storm water – surface drainage. However, continued erosion of the riverbank may lead to point-source pollution from sediment which will contribute to the total maximum daily load (TMDL) of the river.

Proposed Alternatives – Potentially direct, adverse, negligible to minor, short-term, local, non-recurring impacts to storm water – surface drainage. During the construction period, there is the potential for storm water runoff carrying sediment to impact the river. An MPDES Construction General Permit and Stormwater Pollution Prevention Plan will be prepared and Best Management Practices (BMPs) will be installed and maintained by the contractor to mitigate sediment deposition into the river. Long-term BMPs will be installed upon completion of the project to include revegetation, seeding, and reclamation. Potentially direct and indirect, beneficial impacts will result from the restoration of the riverbank and installation of long-term, protective BMPs.

No Action – Potentially direct and indirect, adverse, minor to major, short- to long-term, local and regional, recurring impacts to drinking water and/or clean water if continued erosion of the riverbank continues to negatively affect TMDL of the river.

26. ENVIRONMENTAL JUSTICE

Will the proposed project result in disproportionately high or adverse human health or environmental effects on minority or low-income populations per the Environmental Justice Executive Order 12898? Identify potential impacts to and identify direct, indirect, and cumulative effects likely to occur as a result of the proposed action.

The current riverbank is protective of the irrigation system and agricultural land which relies on this system.

Proposed Alternatives and No Action –No impacts to environmental justice are expected as the proposed project will not result in disproportionately high or adverse human health of environmental effects on minority or low-income populations. The economic impact will ultimately affect all users of the system proportionately. No disproportionate effects among any portion of the community are expected.

EA Prepared By:	Name: Samantha Treu Title: MEPA Coordinator	Date: 04/12/23 Email: samantha.treu@mt.gov
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V. FINDING

27. ALTERNATIVE SELECTED:

The proposed Alternative 3 for riverbank restoration is selected. Repair and restoration of the riverbank will be the most protective alternative for public health and safety and minimize potentially adverse effects on the environment.

Installation of root wads for bank stabilization as Alternative 3 would involve the excavation and grading of the existing riverbank, installation of root wads into the riverbank, proper anchoring of the root wads and stabilization of the remaining riverbank above the root wads. Root wad stabilization utilizes a “softer” version of bank armoring with native materials to achieve the same result as Alternative 2. Root wads will also create a beneficial habitat within the river for wildlife and the fishery. The installation of root wads would effectively minimize erosion and channel migration while providing natural habitat for the existing ecosystems. Approximately ten (10) root wad structures will be added 60 feet apart along the 600 feet of proposed bank stabilization.

Alternative 3 will meet all the goals and objectives set forth in section 3.0 of the PEP. The alternative will help improve water management while utilizing the existing infrastructure, preserve the ability of using the current water resource (Sprinkler Lateral) and provide water for the PVID delivery system, improve the natural habitat as well as help to preserve the water quality and public safety near eroding slopes.

28. SIGNIFICANCE OF POTENTIAL IMPACTS:

Water Quality, Quantity, and Distribution

During construction, the contractor will be required to obtain any applicable permits required for construction. BMPs protective of water quality should be installed, monitored, and maintained by the contractor per the MPDES CGP and SWPPP.

Air Quality

Temporary, potentially direct, adverse impacts to air quality are likely to be minimal as there may be some dust introduced to the environment during construction. The contractor will be required to provide dust control throughout construction to mitigate any generated dust.

Vegetation Cover, Quantity, and Quality

Potentially direct, adverse, minor to moderate, short-term, local impacts to vegetation cover exist during construction. Efforts should be made to preserve existing vegetation where applicable. BMPs should be installed and monitored per the MPDES CGP and SWPPP. Actions in the preferred alternative are not likely to have impacts on the area wetlands. The project is assumed to include restoration of riverine habitat upon completion.

Terrestrial, Avian, and Aquatic Life and Habitats

Potentially indirect, adverse, minor to moderate, short-term, local impacts to terrestrial, avian and aquatic life and habitats. Vegetative removal should be limited to the project area. Final stabilization should be achieved by the end of the proposed construction period.

Aesthetics/Noise

Potentially adverse impacts exist during construction. Overall, the proposed construction during this project is not anticipated to affect the visual quality because the site will be restored by the end of the project, and possibly improve visual aesthetics. The noise above the project areas typical level will most likely be produced during construction. To minimize the impact of this disturbance, the contractor will only work within the hours of 7 AM to 7 PM. The increased noise will only be temporary and a minor disturbance. Exhaust fumes may be an adverse condition due to the operation of heavy construction equipment.

Stormwater

There is expected to be little to no impact on stormwater runoff. During construction, the contractor will be required to prepare and submit a SWPPP and acquire the required permits for construction. BMPs should be installed and maintained according to the SWPPP.

Human Health and Safety

Potentially direct and indirect, adverse, minor, short-term, local impacts to human health and safety exist during construction. Heavy equipment would be used during construction of the proposed restoration of the riverbank. Operation of heavy equipment poses a potential threat to public safety. There should be no impact during construction, but the typical risk to the public's safety may be increased during construction. BMPs should be installed to protect the public from the working construction extents.

29. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

No impacts appear to require a mitigated EA or EIS.

This is the final decision notice.

☐

EIS

☐

More Detailed EA

☒

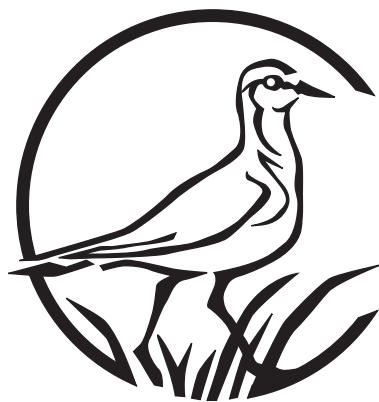
No Further Analysis

EA Approved By:	Name: Mark W Bostrom
	Title: Division Administrator
Signature:	Date: 5/22/2023 8:14:52 AM MDT

DocuSigned by:

Mark W Bostrom

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MONTANA Natural Heritage Program

1515 East 6th Avenue
Helena, MT 59620
(406) 444-5363
mtnhp.org



Latitude	Longitude
48.56569	-109.05610
48.58356	-109.08111

Summarized by:
PVID Milk River
(Custom Area of Interest)



Suggested Citation

Montana Natural Heritage Program. Environmental Summary Report.
for Latitude 48.56569 to 48.58356 and Longitude -109.05610 to -109.08111. Retrieved on 4/11/2023.

The Montana Natural Heritage Program is part of the Montana State Library's Natural Resource Information System. Since 1985, it has served as a neutral and non-regulatory provider of easily accessible information on Montana's species and biological communities to inform all stakeholders in environmental review, permitting, and planning processes. The program is part of NatureServe, a network of over 80 similar programs in states, provinces, and nations throughout the Western Hemisphere, working to provide current and comprehensive distribution and status information on species and biological communities.



Environmental Summary

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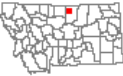
Introduction to Environmental Summary Report

Environmental Summary Reports from the Montana Natural Heritage Program (MTNHP) provide information on species and biological communities to inform all stakeholders in environmental review, permitting, and planning processes. For information on environmental permits in Montana, please see permitting overviews by the [Montana Department of Environmental Quality](#), the [Montana Department of Natural Resources and Conservation](#), the [Index of Environmental Permits for Montana](#) and our [Suggested Contacts for Natural Resource Management Agencies](#). The report for your area of interest consists of introductory and related materials in this PDF and an Excel workbook with worksheets summarizing information managed in the MTNHP databases for: (1) species occurrences; (2) other observed species without species occurrences; (3) other species potentially present based on their range, presence of associated habitats, or predictive distribution model output if available; (4) structured surveys that follow a protocol capable of detecting one or more species; (5) land cover mapped as ecological systems; (6) wetland and riparian mapping; (7) land management categories; and (8) biological reports associated with plant and animal observations. If your area of interest corresponds to a statewide polygon layer (e.g., watersheds, counties, or public land survey sections) information summaries in your report will exactly match those boundaries. However, if your report is for a custom area, users should be aware that summaries do not correspond to the exact boundaries of the polygon they have specified, but instead are a summary across a layer of hexagons intersected by the polygon they specified as shown on the report cover. Summarizing by these hexagons which are one square mile in area and approximately one kilometer in length on each side allows for consistent and rapid delivery of summaries based on a uniform grid that has been used for planning efforts across the western United States (e.g., Western Association of Fish and Wildlife Agencies - [Crucial Habitat Assessment Tool](#)).

In presenting this information, MTNHP is working towards assisting the user with rapidly assessing the known or potential species and biological communities, land management categories, and biological reports associated with the report area. Users are reminded that this information is likely incomplete and may be inaccurate as surveys to document species are lacking in many areas of the state, species' range polygons often include regions of unsuitable habitat, methods of predicting the presence of species or communities are constantly improving, and information is constantly being added and updated in our databases. **Field verification by professional biologists of the absence or presence of species and biological communities in a report area will always be an important obligation of users of our data. Users are encouraged to only use this environmental summary report as a starting point for more in depth analyses and are encouraged to contact state, federal, and tribal resource management agencies for additional data or management guidelines relevant to your efforts. Please see the Appendix for introductory materials to each section of the report, additional information resources, and a list of relevant agency contacts.**



Model Icons	Habitat Icons	Range Icons	Num Obs
Suitable (native range)	Common	Native / Year-round	Count of obs with 'good precision' (<=1000m)
Optimal Suitability	Occasional	Summer	+ indicates additional 'poor precision' obs (1001m-10,000m)
Moderate Suitability		Winter	
Low Suitability		Migratory	
Suitable (introduced range)		Non-native	
		Historical	



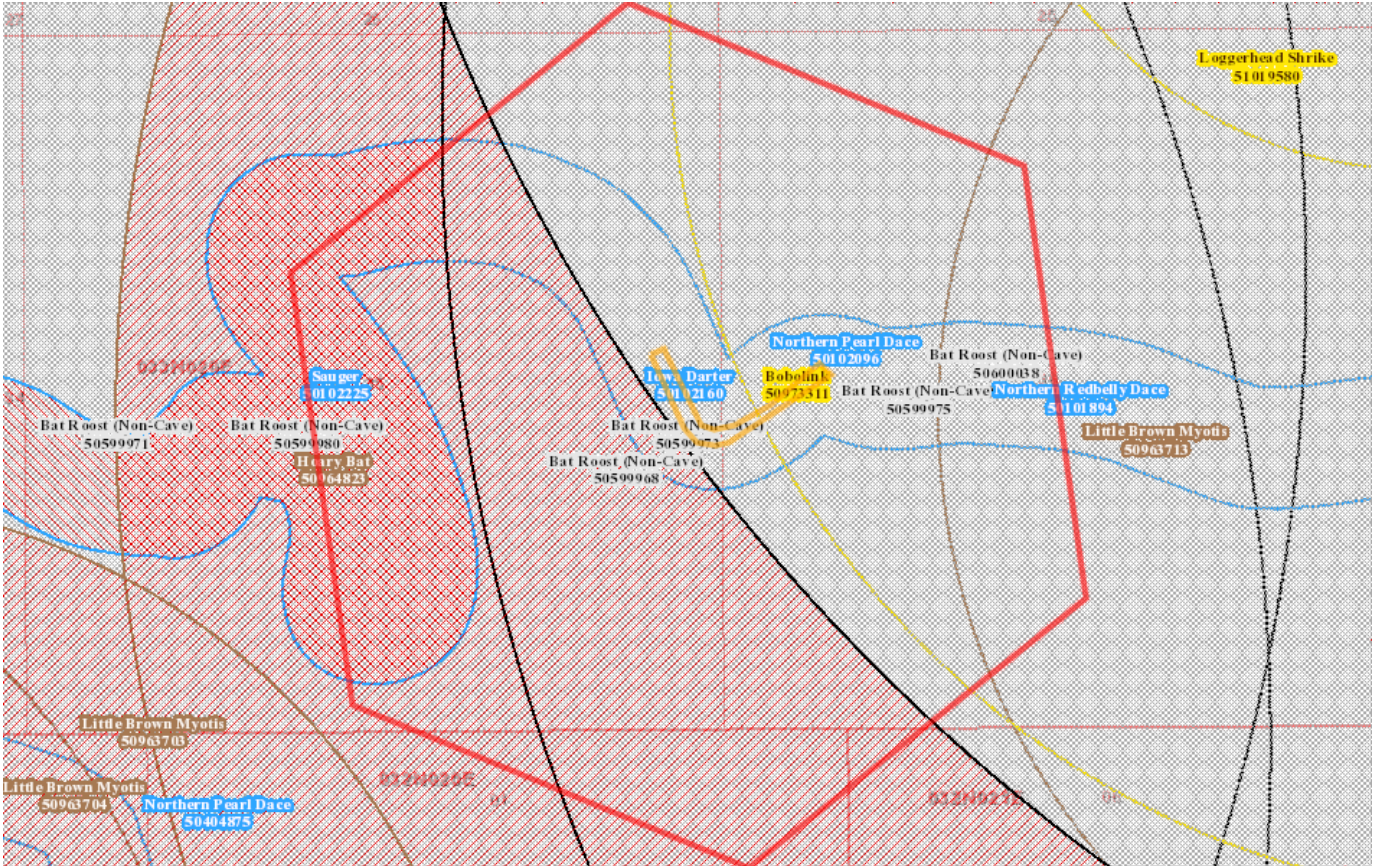
Latitude	Longitude
48.56569	-109.05610
48.58356	-109.08111

Native Species

Summarized by: **PVID Milk River (Custom Area of Interest)**

Filtered by:

Native Species reports are filtered for Species with MT Status = Species of Concern, Special Status, Important Animal Habitat, Potential SOC



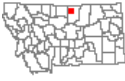
Species Occurrences

	USFWS Sec7	# SO	# Obs	Predicted Model	Range
F - Iowa Darter (<i>Etheostoma exile</i>) SOC		1	+		
View in Field Guide View Predicted Models View Range Maps					
Species of Concern - Native Species Global: G5 State: S3 BLM: SENSITIVE FWP SWAP: SGCN3					
Delineation Criteria Stream reaches and standing water bodies where the species presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: Jul 25, 2022)					
Predicted Models: 100% Suitable (native range) (deductive)					
F - Northern Pearl Dace (<i>Margariscus nachtriebi</i>) SOC		1			
View in Field Guide View Predicted Models View Range Maps					
Species of Concern - Native Species Global: G5 State: S2 BLM: SENSITIVE FWP SWAP: SGCN2					
Delineation Criteria Stream reaches and standing water bodies where the species presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: Jul 18, 2022)					
Predicted Models: 100% Suitable (native range) (deductive)					
F - Northern Redbelly Dace (<i>Chrosomus eos</i>) SOC		1	+		
View in Field Guide View Predicted Models View Range Maps					
Species of Concern - Native Species Global: G5 State: S3 FWP SWAP: SGCN3					
Delineation Criteria Stream reaches and standing water bodies where the species presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: Jul 18, 2022)					
Predicted Models: 100% Suitable (native range) (deductive)					

<div> <div>F - Sauger</div> <div>(<i>Sander canadensis</i>)</div> <div>SOC</div> </div>	<div>DocuSign Envelope ID: 33B8E229-8681-4306-9D27-C58447EA97A4</div>
<div> <div>Species of Concern - Native Species</div> <div>Global: G5 State: S2 BLM: SENSITIVE FWP SWAP: SGCN2</div> <div> <div>Delineation Criteria</div> <div>Stream reaches and standing water bodies where the species presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: Jul 18, 2022)</div> </div> <div> <div>Predicted Models:</div> <div>100% Suitable (native range) (deductive)</div> </div> </div>	<div> <div>B - Bobolink</div> <div>(<i>Dolichonyx oryzivorus</i>)</div> <div>SOC</div> </div>
<div> <div>View in Field Guide</div> <div>View Predicted Models</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G5 State: S3B USFWS: MBTA; BCC10; BCC11; BCC17 FWP SWAP: SGCN3 PIF: 3</div> <div> <div>Delineation Criteria</div> <div>Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 150 meters in order to conservatively encompass male territory size reported for the species and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Dec 28, 2022)</div> </div> <div> <div>Predicted Models:</div> <div>100% Optimal (inductive)</div> </div> </div>	<div> <div>M - Little Brown Myotis</div> <div>(<i>Myotis lucifugus</i>)</div> <div>SOC</div> </div>
<div> <div>View in Field Guide</div> <div>View Predicted Models</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G3G4 State: S3 FWP SWAP: SGCN3</div> <div> <div>Delineation Criteria</div> <div>Confirmed area of occupancy based on the documented presence (mistnet captures, definitively identified acoustic recordings, or definitively identified roosting individuals) of adults or juveniles. Point observation location is buffered by a distance of 1,600 meters in order to encompass the greater than 1,500 meters foraging distance reported for the species in New Brunswick, Canada and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. When cave locations are involved, point observations are mapped in the center of a one-square mile hexagon to protect the exact location of the cave entrance as per the Federal Cave Resource Protection Act and associated regulations (U.S. Code Title 16 Chapter 63, Code of Federal Regulations Title 43 Subtitle A Part 37). The outer edges of the hexagon are then buffered by a distance of 1,600 meters and otherwise by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. All of the one-square mile hexagons intersecting this buffered area are presented as the Species Occurrence record. (Last Updated: Dec 22, 2022)</div> </div> <div> <div>Predicted Models:</div> <div>100% Moderate (inductive)</div> </div> </div>	<div> <div>M - Hoary Bat</div> <div>(<i>Lasiurus cinereus</i>)</div> <div>SOC</div> </div>
<div> <div>View in Field Guide</div> <div>View Predicted Models</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G3G4 State: S3B BLM: SENSITIVE FWP SWAP: SGCN3</div> <div> <div>Delineation Criteria</div> <div>Confirmed area of occupancy based on the documented presence (mistnet captures, definitively identified acoustic recordings, and definitively identified roosting individuals) of adults or juveniles during the active season. Point observation location is buffered by a minimum distance of 3,500 meters in order to be conservative about encompassing the maximum reported foraging distance for the congeneric <i>Lasiurus borealis</i> and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Dec 23, 2022)</div> </div> <div> <div>Predicted Models:</div> <div>100% Moderate (inductive)</div> </div> </div>	<div> <div>O - Bat Roost (Non-Cave)</div> <div>(<i>Bat Roost (Non-Cave)</i>)</div> <div>IAH</div> </div>
<div> <div>View in Field Guide</div> <div>Important Animal Habitat - Native Species</div> <div>Global: GNR State: SNR</div> <div> <div>Delineation Criteria</div> <div>Confirmed area of occupancy based on the documented presence of adults or juveniles of any bat species at non-cave natural roost sites (e.g. rock outcrops, trees), below ground human created roost sites (e.g. mines), and above ground human created roost sites (e.g., bridges, buildings). Point observation locations are buffered by a distance of 4,500 meters in order to encompass the 95% confidence interval for nightly foraging distance reported for Townsend's Big-eared Bat (a resident Montana bat Species of Concern) and otherwise by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Oct 22, 2019)</div> </div> </div>	



Model Icons	Habitat Icons	Range Icons	Num Obs
Suitable (native range)	Common	Native / Year-round	Count of obs with 'good precision' (<=1000m)
Optimal Suitability	Occasional	Summer	+ indicates additional 'poor precision' obs (1001m-10,000m)
Moderate Suitability		Winter	
Low Suitability		Migratory	
Suitable (introduced range)		Non-native	
		Historical	



Latitude	Longitude
48.56569	-109.05610
48.58356	-109.08111

Native Species

Summarized by: **PVID Milk River** (*Custom Area of Interest*)

Filtered by:

Native Species reports are filtered for Species with MT Status = Species of Concern, Special Status, Important Animal Habitat, Potential SOC

Other Observed Species

	USFWS Sec7	# Obs	Predicted Model	Range
<div><div><div>F - Brassy Minnow (<i>Hybognathus hankinsoni</i>)</div><div>PSOC</div></div></div> <div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Potential Species of Concern - Native Species</div><div>Global: G5 State: S4</div><div>Predicted Models: 100% Suitable (native range) (deductive)</div></div>		+		
<div><div><div>F - Brook Stickleback (<i>Culaea inconstans</i>)</div><div>PSOC</div></div></div> <div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Potential Species of Concern - Native/Non-native Species - (depends on location or taxa)</div><div>Global: G5 State: S4</div><div>Predicted Models: 100% Suitable (native range) (deductive)</div></div>		+		
<div><div><div>F - Burbot (<i>Lota lota</i>)</div><div>PSOC</div></div></div> <div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Potential Species of Concern - Native Species</div><div>Global: G5 State: S4</div><div>Predicted Models: 100% Suitable (native range) (deductive)</div></div>		+		
<div><div><div>F - Plains Minnow (<i>Hybognathus placitus</i>)</div><div>PSOC</div></div></div> <div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Potential Species of Concern - Native Species</div><div>Global: G4 State: S4</div><div>Predicted Models: 100% Suitable (native range) (deductive)</div></div>		+		
<div><div><div>B - Bald Eagle (<i>Haliaeetus leucocephalus</i>)</div><div>SSS</div></div></div> <div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Special Status Species - Native Species</div><div>Global: G5 State: S4 USFWS: BGEPA; MBTA USFS: Sensitive - Known in Forests (BD, BRT, KOOT, LOLO) BLM: SENSITIVE PIF: 2</div><div>Predicted Models: 100% Optimal (inductive)</div></div>		1		
<div><div><div>F - Creek Chub (<i>Semotilus atromaculatus</i>)</div><div>PSOC</div></div></div> <div><div><div>View in Field Guide</div><div>View Range Maps</div></div><div>Potential Species of Concern - Native/Non-native Species - (depends on location or taxa)</div><div>Global: G5 State: S4</div></div>		+	Not Assessed	

Summarized by: **PVID Milk River** (*Custom Area of Interest*)

Filtered by:

Native Species reports are filtered for Species with MT Status = Species of Concern, Special Status, Important Animal Habitat, Potential SOC

	USFWS Sec7	Predicted Model	Range
<div> <div></div> <div> B - Black-billed Cuckoo <i>(Coccyzus erythrophthalmus)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3, SGIN PIF: 2 </div> <div> Predicted Models: 100% Optimal (inductive) </div>			
<div> <div></div> <div> B - Great Blue Heron <i>(Ardea herodias)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 </div> <div> Predicted Models: 100% Optimal (inductive) </div>			
<div> <div></div> <div> M - Eastern Red Bat <i>(Lasiurus borealis)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species Global: G3G4 State: S3B BLM: SENSITIVE </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> M - North American Porcupine <i>(Erethizon dorsatum)</i> PSOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Potential Species of Concern - Native Species Global: G5 State: S3S4 FWP SWAP: SGIN </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> M - Townsend's Big-eared Bat <i>(Corynorhinus townsendii)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species Global: G4 State: S3 USFS: Sensitive - Known in Forests (BD, BRT, KOOT, LOLO) BLM: SENSITIVE FWP SWAP: SGCN3 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> A - Northern Leopard Frog <i>(Lithobates pipiens)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> USFS: Sensitive - Known in Forests (KOOT) </div> <div> Species of Concern - Native Species Global: G5 State: S1,S4 Sensitive - Suspected in Forests (BRT, LOLO) BLM: SENSITIVE FWP SWAP: SGCN1 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> B - White-faced Ibis <i>(Plegadis chihi)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> B - Eastern Screech-Owl <i>(Megascops asio)</i> PSOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Potential Species of Concern - Native Species Global: G5 State: S3S4 USFWS: MBTA PIF: 3 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> V - Chenopodium subglabrum <i>(Smooth Goosefoot)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species Global: G3G4 State: S2 Plant Threat Score: Unknown CCVI: Highly Vulnerable </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> B - American Bittern <i>(Botaurus lentiginosus)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 3 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> B - Ovenbird <i>(Seiurus aurocapilla)</i> PSOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Potential Species of Concern - Native Species Global: G5 State: S4B USFWS: MBTA PIF: 3 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> M - Preble's Shrew <i>(Sorex preblei)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species Global: G4 State: S3 FWP SWAP: SGCN3 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> <div> M - Western Pygmy Shrew <i>(Sorex eximius)</i> SOC </div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species Global: G4 State: S3 FWP SWAP: SGCN3 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			

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B - Black-and-white Warbler (<i>Mniotilta varia</i>) PSOC			Not Assessed		M				
Potential Species of Concern - Native Species Global: G5 State: S4B USFWS: MBTA									
I - Polygonia progne (Gray Comma) SOC						Not Assessed		Y	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G5 State: S2									
V - Centunculus minimus (Chaffweed) SOC						Not Assessed		Y	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G5 State: S2 Plant Threat Score: No Known Threats									
B - Alder Flycatcher (<i>Empidonax alnorum</i>) SOC						Not Assessed		M	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3									
B - Loggerhead Shrike (<i>Lanius ludovicianus</i>) SOC						Not Assessed		S M	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G4 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2									
M - Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>) SOC						Not Assessed		Y	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G4 State: S3 BLM: SENSITIVE FWP SWAP: SGCN3									
B - Burrowing Owl (<i>Athene cunicularia</i>) SOC						Not Assessed		S M	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G4 State: S3B USFWS: MBTA; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 1									
B - Ferruginous Hawk (<i>Buteo regalis</i>) SOC						Not Assessed		S M	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G4 State: S3B USFWS: MBTA; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2									
B - Greater Sage-Grouse (<i>Centrocercus urophasianus</i>) SOC						Not Assessed		Y	
View in Field Guide View Range Maps						Species of Concern - Native Species			
USFS: Sensitive - Known in Forests (BD)									
Global: G3G4 State: S2 Species of Conservation Concern in Forests (CG) BLM: SENSITIVE FWP SWAP: SGCN2 PIF: 1									
R - Greater Short-horned Lizard (<i>Phrynosoma hernandesi</i>) SOC						Not Assessed		Y	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G5 State: S3 BLM: SENSITIVE FWP SWAP: SGCN3, SGIN									
V - Senecio integerrimus var. scribneri (Scribner's Ragwort) SOC						Not Assessed		Y	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G5T2T3 State: S2S3 Plant Threat Score: No Known Threats CCVI: Less Vulnerable									
B - Mountain Plover (<i>Charadrius montanus</i>) SOC						Not Assessed		S M	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G3 State: S2B USFWS: MBTA; BCC10; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN2 PIF: 1									
M - Black-footed Ferret (<i>Mustela nigripes</i>) SOC						Not Assessed		H	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G1 State: S1 USFWS: LE; XN BLM: ENDANGERED FWP SWAP: SGCN1									
B - Thick-billed Longspur (<i>Rhynchophanes mccownii</i>) SOC						Not Assessed		S M	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G4 State: S3B USFWS: MBTA; BCC10; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2									
B - Chestnut-collared Longspur (<i>Calcarius ornatus</i>) SOC						Not Assessed		S M	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G5 State: S2B USFWS: MBTA; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN2 PIF: 2									
B - Sprague's Pipit (<i>Anthus spragueii</i>) SOC						7	Not Assessed		S M
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G3G4 State: S3B USFWS: MBTA; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 1									
B - Baird's Sparrow (<i>Centronyx bairdii</i>) SOC						Not Assessed		S M	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G4 State: S3B USFWS: MBTA; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 1									
B - Nelson's Sparrow (<i>Ammospiza nelsoni</i>) SOC						Not Assessed		S M	
View in Field Guide View Range Maps						Species of Concern - Native Species			
Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3									
I - Phanogomphus graslinellus (Pronghorn Clubtail) PSOC						Not Assessed		Y	
View in Field Guide View Range Maps						Potential Species of Concern - Native Species			
Global: G5 State: S3S5									
I - Rhionaeschna multicolor (Blue-eyed Darner) PSOC						Not Assessed		Y	
View in Field Guide View Range Maps						Potential Species of Concern - Native Species			
Global: G5 State: S2S4									
I - Aeshna constricta (Lance-tipped Darner) PSOC						Not Assessed		Y	
View in Field Guide View Range Maps						Potential Species of Concern - Native Species			
Global: G5 State: S1S3									
I - Argia emma (Emma's Dancer) PSOC						Not Assessed		Y	
View in Field Guide View Range Maps						Potential Species of Concern - Native Species			
Global: G5 State: S3S5									

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I - Coenagrion angulatum (<i>Prairie Bluet</i>) PSOC		Not Assessed		Y
View in Field Guide View Range Maps				
Potential Species of Concern - Native Species		Global: G5	State: S1S3	
I - Enallagma praevarum (<i>Arroyo Bluet</i>) PSOC		Not Assessed		Y
View in Field Guide View Range Maps				
Potential Species of Concern - Native Species		Global: G5	State: S3S5	
I - Sympetrum madidum (<i>Red-veined Meadowhawk</i>) PSOC		Not Assessed		Y
View in Field Guide View Range Maps				
Potential Species of Concern - Native Species		Global: G5	State: S2S3	
B - Sedge Wren (<i>Cistothorus stellaris</i>) SOC		Not Assessed		S M
View in Field Guide View Range Maps				
Species of Concern - Native Species		Global: G5	State: S3B	USFWS: MBTA FWP SWAP: SGCN3 PIF: 3
B - Clark's Grebe (<i>Aechmophorus clarkii</i>) SOC		Not Assessed		M
View in Field Guide View Range Maps				
Species of Concern - Native Species		Global: G5	State: S3B	USFWS: MBTA; BCC10; BCC11 FWP SWAP: SGCN3 PIF: 3
B - Common Loon (<i>Gavia immer</i>) SOC		Not Assessed		M
View in Field Guide View Range Maps				
Species of Concern - Native Species		Global: G5	State: S3B	USFWS: MBTA USFS: Sensitive - Known in Forests (KOOT, LOLO) FWP SWAP: SGCN3 PIF: 1
B - Trumpeter Swan (<i>Cygnus buccinator</i>) SOC		Not Assessed		M
View in Field Guide View Range Maps				
Species of Concern - Native Species		Global: G4	State: S3	USFWS: MBTA USFS: Sensitive - Known in Forests (BD) BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 1
M - Bison (<i>Bos bison</i>) SOC		Not Assessed		H
View in Field Guide View Range Maps				
Species of Concern - Native Species		Global: G4	State: S2	FWP SWAP: SGCN2
B - Brewer's Sparrow (<i>Spizella breweri</i>) SOC		Not Assessed		S M
View in Field Guide View Range Maps				
Species of Concern - Native Species		Global: G5	State: S3B	USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2
B - Sage Thrasher (<i>Oreoscoptes montanus</i>) SOC		Not Assessed		S M
View in Field Guide View Range Maps				
Species of Concern - Native Species		Global: G4	State: S3B	USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 3
B - Evening Grosbeak (<i>Coccothraustes vespertinus</i>) SOC		Not Assessed		WM
View in Field Guide View Range Maps				
Species of Concern - Native Species		Global: G5	State: S3	USFWS: MBTA; BCC10 FWP SWAP: SGCN3

Structured Surveys

Summarized by: **PVID Milk River** (*Custom Area of Interest*)

The Montana Natural Heritage Program (MTNHP) records information on the locations where more than 80 different types of well-defined repeatable survey protocols capable of detecting an animal species or suite of animal species have been conducted by state, federal, tribal, university, or private consulting biologists. Examples of structured survey protocols tracked by MTNHP include: visual encounter and dip net surveys for pond breeding amphibians, point counts for birds, call playback surveys for selected bird species, visual surveys of migrating raptors, kick net stream reach surveys for macroinvertebrates, visual encounter cover object surveys for terrestrial mollusks, bat acoustic or mist net surveys, pitfall and/or snap trap surveys for small terrestrial mammals, track or camera trap surveys for large mammals, and trap surveys for turtles. Whenever possible, photographs of survey locations are stored in MTNHP databases.

MTNHP does not typically manage information on structured surveys for plants; surveys for invasive species may be a future exception.

Within the report area you have requested, structured surveys are summarized by the number of each type of structured survey protocol that has been conducted, the number of species detections/observations resulting from these surveys, and the most recent year a survey has been conducted.

E-Noxious Weed, Road-based (*Noxious Weed Road-based Visual Surveys*)

Survey Count: 1

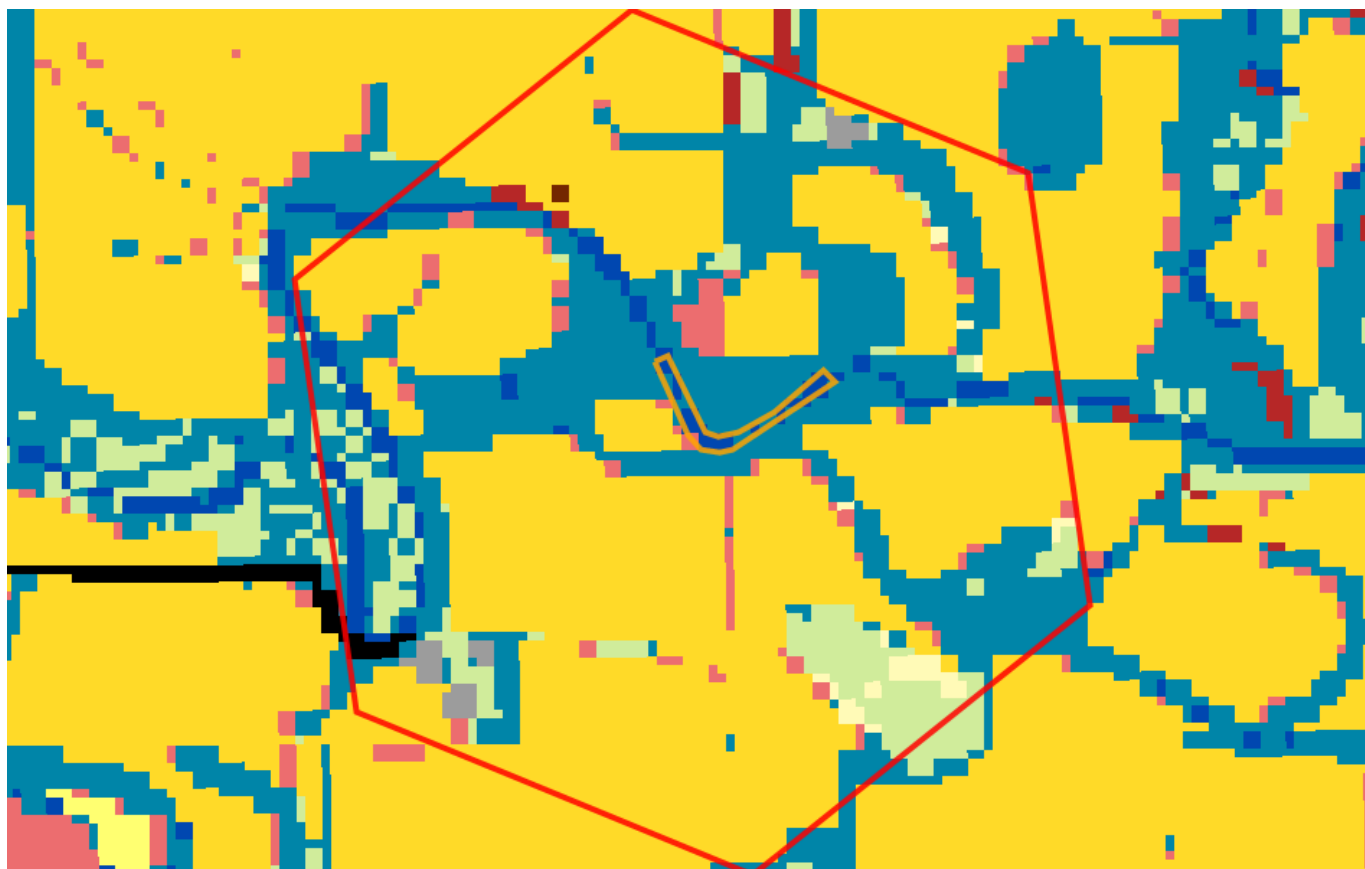
Obs Count: 2

Recent Survey: 2003



Land Cover

Summarized by: **PVID Milk River** (*Custom Area of Interest*)



Human Land Use Agriculture

Cultivated Crops

**57% (366
Acres)**

These areas used for the production of crops, such as corn, soybeans, small grains, sunflowers, vegetables, and cotton, typically on an annual cycle. Agricultural plant cover is variable depending on season and type of farming. Other areas include more stable land cover of orchards and vineyards.



Wetland and Riparian Systems Floodplain and Riparian

Great Plains Floodplain

**28% (180
Acres)**

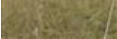
This system occurs along the Missouri and Yellowstone Rivers and their larger tributaries, including parts of the Little Missouri, Clark's Fork Yellowstone, Powder, Tongue, Bighorn, Milk, and Musselshell rivers. These are the big perennial rivers of the region, with hydrologic dynamics largely driven by snowmelt and rainfall originating in their headwater watersheds, rather than local precipitation events. In the absence of disturbance, periodic flooding of fluvial and alluvial soils and channel migration will create depressions and backwaters that support a mosaic of wetland and riparian vegetation, whose composition and structure is sustained, altered and redistributed by hydrology. Dominant communities within this system range from floodplain forests to wet meadows to gravel/sand flats, linked by underlying soils and flooding regimes. In the western part of the system's range in Montana, the overstory dominant species is black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) with narrowleaf cottonwood (*Populus angustifolia*) and eastern cottonwood (*Populus deltoides*) occurring as co-dominants in the riparian/floodplain interface near the mountains. Further east, narrowleaf cottonwood and Plains cottonwood become dominant. In relatively undisturbed stands, willow (*Salix* species), redosier dogwood (*Cornus sericea*) and common chokecherry (*Prunus virginiana*) form a thick, multi-layered shrub understory, with a mixture of cool and warm season graminoid species below.

In Montana, many occurrences are now degraded to the point where the cottonwood overstory is the only remaining natural component. The hydrology of these floodplain systems has been affected by dams, highways, railroads and agricultural ditches, and as a result, they have lost their characteristic wetland /riparian mosaic structure. This has resulted in a highly altered community consisting of relict cottonwood stands with little regeneration. The understory vegetation is dominated by non-native pasture grasses, legumes and other introduced forbs, or by the disclimax western snowberry (*Symphoricarpos occidentalis*) and rose (*Rosa* species) shrub community.



Grassland Systems

Wetland and Riparian Systems



6% (39 Acres)



Great Plains Mixedgrass Prairie

The system covers much of the eastern two-thirds of Montana, occurring continuously for hundreds of square kilometers, interrupted only by wetland/riparian areas or sand prairies. Soils are primarily fine and medium-textured. The growing season averages 115 days, ranging from 100 days on the Canadian border to 130 days on the Wyoming border. Climate is typical of mid-continental regions with long severe winters and hot summers. Grasses typically comprise the greatest canopy cover, and western wheatgrass (*Pascopyrum smithii*) is usually dominant. Other species include thickspike wheatgrass (*Elymus lanceolatus*), green needlegrass (*Nassella viridula*), blue grama (*Bouteloua gracilis*), and needle and thread (*Hesperostipa comata*). Near the Canadian border in north-central Montana, this system grades into rough fescue (*Festuca campestris*) and Idaho fescue (*Festuca idahoensis*) grasslands. Remnants of shortbristle needle and thread (*Hesperostipa curtiseta*) dominated vegetation are found in northernmost Montana and North Dakota, and are associated with productive sites, now mostly converted to farmland. Forb diversity is typically high. In areas of southeastern and central Montana where sagebrush steppe borders the mixed grass prairie, common plant associations include Wyoming big sagebrush-western wheatgrass (*Artemisia tridentata* ssp. *wyomingensis*/*Pascopyrum smithii*). Fire and grazing are the primary drivers of this system. Drought can also impact it, in general favoring the shortgrass component at the expense of the mid-height grasses. With intensive grazing, cool season exotics such as Kentucky bluegrass (*Poa pratensis*), smooth brome (*Bromus inermis*), and Japanese brome (*Bromus japonicus*) increase in dominance; both of these rhizomatous species have been shown to markedly decrease species diversity. Previously cultivated acres that have been re-vegetated with non-native plants have been transformed into associations such as Kentucky bluegrass (*Poa pratensis*)/western wheatgrass (*Pascopyrum smithii*) or into pure crested wheatgrass (*Agropyron cristatum*) stands.



3% (21 Acres)

Wetland and Riparian Systems
Open Water



Open Water

All areas of open water, generally with less than 25% cover of vegetation or soil



3% (18 Acres)





Recently Disturbed or Modified
Introduced Vegetation



Introduced Upland Vegetation - Annual and Biennial Forbland

Land cover is significantly altered/disturbed by introduced annual and biennial forbs. Natural vegetation types are no longer recognizable. Typical species that dominate these areas are knapweed, oxeye daisy, Canada thistle, leafy spurge, pepperweed, and yellow sweetclover.

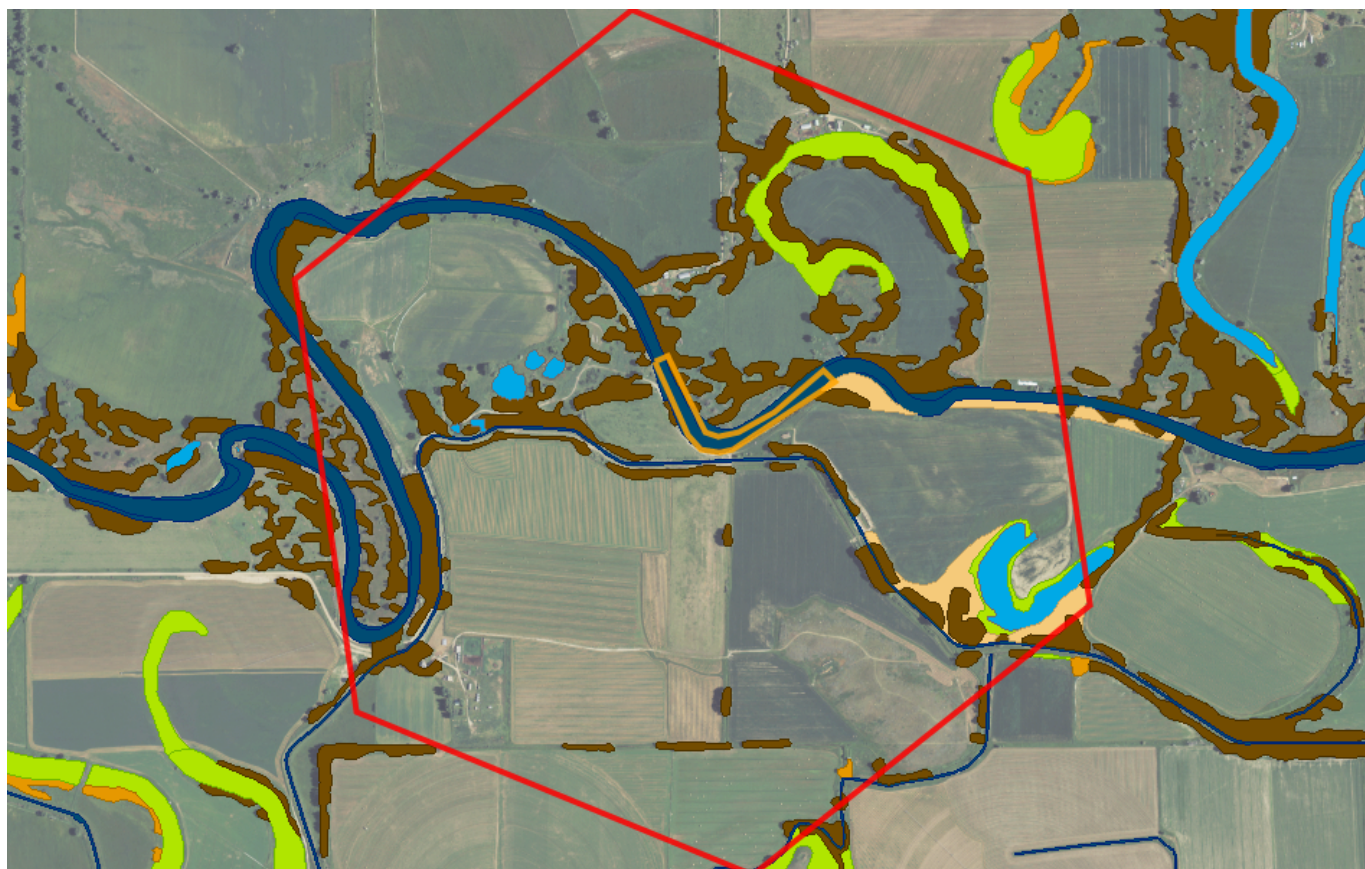
Additional Limited Land Cover

- 1% (6 Acres)  [Big Sagebrush Steppe](#)
- 1% (6 Acres)  [Low Intensity Residential](#)
- <1% (2 Acres)  [Introduced Riparian and Wetland Vegetation](#)
- <1% (2 Acres)  [Other Roads](#)
- <1% (0 Acres)  [Gas and Gas Storage](#)



Wetland and Riparian

Summarized by: **PVID Milk River (Custom Area of Interest)**



Wetland and Riparian Mapping

[Explain](#)

P - Palustrine

AB - Aquatic Bed

F - Semipermanently Flooded 8 Acres
(no modifier) **8 Acres PABF**

P - Palustrine, AB - Aquatic Bed

Wetlands with vegetation growing on or below the water surface for most of the growing season.

EM - Emergent

A - Temporarily Flooded 15 Acres
(no modifier) **15 Acres PEMA**

P - Palustrine, EM - Emergent

Wetlands with erect, rooted herbaceous vegetation present during most of the growing season.

R - Riverine (Rivers)

3 - Upper Perennial

UB - Unconsolidated Bottom

H - Permanently Flooded 23 Acres
(no modifier) **23 Acres R3UBH**

R - Riverine (Rivers), 3 - Upper Perennial, UB - Unconsolidated Bottom

Stream channels where the substrate is at least 25% mud, silt or other fine particles.

US - Unconsolidated Shore

A - Temporarily Flooded 5 Acres
(no modifier) **5 Acres R3USA**

R - Riverine (Rivers), 3 - Upper Perennial, US - Unconsolidated Shore

Shorelines with less than 75% areal cover of stones, boulders, or bedrock and less than 30% vegetation cover. The area is also irregularly exposed due to seasonal or irregular flooding and subsequent drying.

4 - Intermittent

SB - Stream Bed

C - Seasonally Flooded 3 Acres
x - Excavated **3 Acres R4SBCx**

R - Riverine (Rivers), 4 - Intermittent, SB - Stream Bed

Active channel that contains periodic water flow.

Rp - Riparian

1 - Lotic

SS - Scrub-Shrub
(no modifier)

<1 Acres Rp1SS

Rp - Riparian, 1 - Lotic, SS - Scrub-Shrub

This type of riparian area is dominated by woody vegetation that is less than 6 meters (20 feet) tall. Woody vegetation includes tree saplings and trees that are stunted due to environmental conditions.

FO - Forested

EM - Emergent

(no modifier)

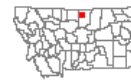
9 Acres **Rp1EM**

Rp - Riparian, 1 - Lotic, EM - Emergent
Riparian areas that have erect, rooted herbaceous vegetation
during most of the growing season.



**Natural Heritage
Program**

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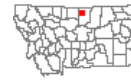
Latitude	Longitude
48.56569	-109.05610
48.58356	-109.08111

Land Management

Summarized by: **PVID Milk River** (*Custom Area of Interest*)



No Land Management records were found in the selected area



Biological Reports

Summarized by: **PVID Milk River** (*Custom Area of Interest*)

Within the report area you have requested, citations for all reports and publications associated with plant or animal observations in Montana Natural Heritage Program (MTNHP) databases are listed and, where possible, links to the documents are included.

The MTNHP plans to include reports associated with terrestrial and aquatic communities in the future as allowed for by staff resources. If you know of reports or publications associated with species or biological communities within the report area that are not shown in this report, please let us know: mtnhp@mt.gov



Tobalske, Claudine and Linda Vance. 2017. ***Predicting the distribution of Russian Olive stands in eastern Montana valley bottoms using NAIP imagery***. Report to the US EPA. Montana Natural Heritage Program. Helena, MT. 40pp.



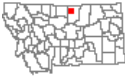
Natural Heritage Program
A program of the **Montana State Library's**
Natural Resource Information System

- Model Icons**
- Suitable (native range)
 - Optimal Suitability
 - Moderate Suitability
 - Low Suitability
 - Suitable (introduced range)

- Habitat Icons**
- Common
 - Occasional

- Range Icons**
- Non-native

Num Obs
Count of obs with
'good precision'
(<=1000m)
+ indicates
additional 'poor
precision' obs
(1001m-
10,000m)



Latitude
48.56569
48.58356

Longitude
-109.05610
-109.08111

Invasive and Pest Species

Summarized by: **PVID Milk River** (*Custom Area of Interest*)

Aquatic Invasive Species

# Obs	Predicted Model	Range
V - Myriophyllum spicatum (Eurasian Water-milfoil) N2A/AIS		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 2A - Aquatic Invasive Species - Non-native Species Global: GNR State: SNA		
Predicted Models: 100% Low (inductive)		
V - Nymphaea odorata (American Water-lily) AIS		
View in Field Guide View Predicted Models View Range Maps		
Aquatic Invasive Species - Non-native Species Global: G5 State: SNA		
Predicted Models: 100% Suitable (introduced range) (deductive)		
F - Common Carp (Cyprinus carpio) AIS +		
View in Field Guide View Predicted Models View Range Maps		
Aquatic Invasive Species - Non-native Species Global: G5 State: SNA		
Predicted Models: 100% Suitable (introduced range) (deductive)		

Noxious Weeds: Priority 1A

V - Centaurea solstitialis (Yellow Starthistle) N1A		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 1A - Non-native Species Global: GNR State: SNA		
Predicted Models: 100% Moderate (inductive)		
V - Phragmites australis ssp. australis (European Common Reed) N1A		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 1A - Non-native Species Global: GST5 State: SNA		
Predicted Models: 100% Moderate (inductive)		
V - Isatis tinctoria (Dyer's Woad) N1A		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 1A - Non-native Species Global: GNR State: SNA		
Predicted Models: 100% Low (inductive)		

Noxious Weeds: Priority 1B

V - Lythrum salicaria (Purple Loosestrife) N1B		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 1B - Non-native Species Global: G5 State: SNA		
Predicted Models: 100% Moderate (inductive)		

Noxious Weeds: Priority 2A

V - Lepidium latifolium (Perennial Pepperweed) N2A		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA		
Predicted Models: 100% Moderate (inductive)		
V - Myriophyllum spicatum (Eurasian Water-milfoil) N2A/AIS		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 2A - Aquatic Invasive Species - Non-native Species Global: GNR State: SNA		
Predicted Models: 100% Low (inductive)		
V - Rhamnus cathartica (Common Buckthorn) N2A		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA		
Predicted Models: 100% Low (inductive)		
V - Ventenata dubia (Ventenata) N2A		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA		
Predicted Models: 100% Low (inductive)		

Noxious Weeds: Priority 2B

V - Acroptilon repens (Russian Knapweed) N2B		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA		
Predicted Models: 100% Moderate (inductive)		
V - Cirsium arvense (Canada Thistle) N2B 1		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 2B - Non-native Species Global: G5 State: SNA		
Predicted Models: 100% Moderate (inductive)		
V - Euphorbia virgata (Leafy Spurge) N2B		
View in Field Guide View Predicted Models View Range Maps		
Noxious Weed: Priority 2B - Non-native Species Global: GNR State: SNA		
Predicted Models: 100% Moderate (inductive)		

Global: **GNR** State: **SNA**

Predicted Models: 100% Moderate (inductive)

View Range Maps

Global: **GNR** State: **SNA**

Predicted Models: 100% Moderate (inductive)

predicted

Global: **GNR** State

V - Convolvulus arvensis (*Field Bindweed*) **N2E**

Global: **GNR** State

V - Cynoglossum officinale (*Common Hound's-tongue*)

Non-nati

Downloaded from <http://ajph.org/> on November 10, 2015

[View in Field Guide](#) [View Predicted](#)

ductive,

Downloaded from <http://ajph.org/> on November 10, 2015

New Range Maps

Noxious Weed: Priority 2B - Non-Hall

Regulated Weeds: Priority 3

R3

View Range Maps

Global: **GNR** State: **SNA**

Predicted Models: 100% Optimal (inductive)

Biocontrol Species

BIOCTRL

[View Range Maps](#)

Global: **GNR** State: **SNA**

Predicted Models: 100% Moderate (inductive)

predicted

Global: **GNR** State: **SNA**

Predicted Models:  100% Moderate (inductive)

View Range

Global: **GNR** State: **SNA**

Predicted Models:  100% Moderate (inductive)

predicted

Global: **GNR** State: **SNA**

Predicted Models: L 100% Low (inductive)

Introduction to Montana Natural Heritage Program



P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • fax 406.444.0266 • phone 406.444.5363 • mtnhp.org

INTRODUCTION

The Montana Natural Heritage Program (MTNHP) is Montana's source for reliable and objective information on Montana's native species and habitats, emphasizing those of conservation concern. MTNHP was created by the Montana legislature in 1983 as part of the Natural Resource Information System (NRIS) at the Montana State Library (MSL). MTNHP is "a program of information acquisition, storage, and retrieval for data relating to the flora, fauna, and biological community types of Montana" (MCA 90-15-102). MTNHP's activities are guided by statute as well as through ongoing interaction with, and feedback from, principal data source agencies such as Montana Fish, Wildlife, and Parks, the Montana Department of Environmental Quality, the Montana Department of Natural Resources and Conservation, the Montana University System, the US Forest Service, and the US Bureau of Land Management. Since the first staff was hired in 1985, the Program has logged a long record of success, and developed into a highly respected, service-oriented program. MTNHP is widely recognized as one of the most advanced and effective of over 80 natural heritage programs throughout the Western Hemisphere.

VISION

Our vision is that public agencies, the private sector, the education sector, and the general public will trust and rely upon MTNHP as the source for information and expertise on Montana's species and habitats, especially those of conservation concern. We strive to provide easy access to our information in order for users to save time and money, speed environmental reviews, and inform decision making.

CORE VALUES

- We endeavor to be a single statewide source of accurate and up-to-date information on Montana's plants, animals, and aquatic and terrestrial biological communities.
- We actively listen to our data users and work responsively to meet their information and training needs.
- We strive to provide neutral, trusted, timely, and equitable service to all of our information users.
- We make every effort to be transparent to our data users in setting work priorities and providing data products.

CONFIDENTIALITY

All information requests made to the Montana Natural Heritage Program are considered library records and are protected from disclosure by the Montana Library Records Confidentiality Act (MCA 22-1-11).

INFORMATION MANAGED

Information managed at the Montana Natural Heritage Program is botanical, zoological, and ecological information that describes the distribution (e.g., observations, structured surveys, range polygons, predicted habitat suitability models), conservation status (e.g., global and state conservation status ranks, including threats), and other supporting information (e.g., accounts and references) on the biology and ecology of species and biological communities.

Data Use Terms and Conditions


- Montana Natural Heritage Program (MTNHP) products and services are based on biological data and the objective interpretation of those data by professional scientists. MTNHP does not advocate any particular philosophy of natural resource protection, management, development, or public policy.
- MTNHP has no natural resource management or regulatory authority. Products, statements, and services from MTNHP are intended to inform parties as to the state of scientific knowledge about certain natural resources, and to further develop that knowledge. The information is not intended as natural resource management guidelines or prescriptions or a determination of environmental impacts. MTNHP recommends consultation with appropriate state, federal, and tribal resource management agencies and authorities in the area where your project is located.
- Information on the status and spatial distribution of biological resources produced by MTNHP are intended to inform parties of the state-wide status, known occurrence, or the likelihood of the presence of those resources. **These products are not intended to substitute for field-collected data, nor are they intended to be the sole basis for natural resource management decisions.**
- MTNHP does not portray its data as exhaustive or comprehensive inventories of rare species or biological communities. **Field verification of the absence or presence of sensitive species and biological communities will always be an important obligation of users of our data.**
- MTNHP responds equally to all requests for products and services, regardless of the purpose or identity of the requester.
- Because MTNHP constantly updates and revises its databases with new data and information, products will become outdated over time. Interested parties are encouraged to obtain the most current information possible from MTNHP, rather than using older products. We add, review, update, and delete records on a daily basis. Consequently, we strongly advise that you update your MTNHP data sets at a minimum of every four months for most applications of our information.
- MTNHP data require a certain degree of biological expertise for proper analysis, interpretation, and application. Our staff is available to advise you on questions regarding the interpretation or appropriate use of the data that we provide. See [Contact Information for MTNHP Staff](#)
- The information provided to you by MTNHP may include sensitive data that if publicly released might jeopardize the welfare of threatened, endangered, or sensitive species or biological communities. This information is intended for distribution or use only within your department, agency, or business. Subcontractors may have access to the data during the course of any given project, but should not be given a copy for their use on subsequent, unrelated work.
- MTNHP data are made freely available. Duplication of hard-copy or digital MTNHP products with the intent to sell is prohibited without written consent by MTNHP. Should you be asked by individuals outside your organization for the type of data that we provide, please refer them to MTNHP.
- MTNHP and appropriate staff members should be appropriately acknowledged as an information source in any third-party product involving MTNHP data, reports, papers, publications, or in maps that incorporate MTNHP graphic elements.
- Sources of our data include museum specimens, published and unpublished scientific literature, field surveys by state and federal agencies and private contractors, and reports from knowledgeable individuals. MTNHP actively solicits and encourages additions, corrections and updates, new observations or collections, and comments on any of the data we provide.
- MTNHP staff and contractors do not enter or cross privately-owned lands without express permission from the landowner. However, the program cannot guarantee that information provided to us by others was obtained under adherence to this policy.

Suggested Contacts for Natural Resource Management Agencies

As required by Montana statute (MCA 90-15), the Montana Natural Heritage Program works with state, federal, tribal, nongovernmental organizations, and private partners to ensure that the latest animal and plant distribution and status information is incorporated into our databases so that it can be used to inform a variety of permitting and planning processes and management decisions. We encourage you to contact state, federal, and tribal resource management agencies in the area where your project is located and review the permitting overviews by the [Montana Department of Environmental Quality](#), the [Montana Department of Natural Resources and Conservation](#) and the [Index of Environmental Permits for Montana](#) for guidelines relevant to your efforts. In particular, we encourage you to contact the Montana Department of Fish, Wildlife, and Parks for the latest data and management information regarding hunted and high-profile management species and to use the U.S. Fish and Wildlife Service's [Information Planning and Consultation \(IPAC\) website](#) regarding U.S. Endangered Species Act listed Threatened, Endangered, or Candidate species.

For your convenience, we have compiled a list of relevant agency contacts and links below:

Montana Fish, Wildlife, and Parks

Fish Species	Zachary Shattuck zshattuck@mt.gov (406) 444-1231 or Eric Roberts eroberts@mt.gov (406) 444-5334																												
American Bison Black-footed Ferret Black-tailed Prairie Dog Bald Eagle Golden Eagle Common Loon Least Tern Piping Plover Whooping Crane	Kristian Smucker KSmucker@mt.gov (406) 444-5209																												
Grizzly Bear Greater Sage Grouse Trumpeter Swan Big Game Upland Game Birds Furbearers	Brian Wakeling Brian.Wakeling@mt.gov (406) 444-3940																												
Managed Terrestrial Game and Nongame Animal Data	Smith Wells – MFWP Data Analyst smith.wells@mt.gov (406) 444-3759																												
Fisheries Data	Ryan Alger – MFWP Data Analyst ryan.alger@mt.gov (406) 444-5365																												
Wildlife and Fisheries Scientific Collector's Permits	https://fwp.mt.gov/buyandapply/commercialwildlifeandscientificpermits/scientific Kammi McClain for Wildlife Kammi.McClain@mt.gov (406) 444-2612 Kim Wedde for Fisheries kim.wedde@mt.gov (406) 444-5594																												
Fish and Wildlife Recommendations for Subdivision Development	Charlie Sperry CSperry@mt.gov (406) 444-3888 See https://fwp.mt.gov/conservation/living-with-wildlife/subdivision-recommendations																												
Regional Contacts 	<table><tr><td>Region 1</td><td>(Kalispell)</td><td>(406) 752-5501</td><td>fwprg12@mt.gov</td></tr><tr><td>Region 2</td><td>(Missoula)</td><td>(406) 542-5500</td><td>fwprg22@mt.gov</td></tr><tr><td>Region 3</td><td>(Bozeman)</td><td>(406) 577-7900</td><td>fwprg3@mt.gov</td></tr><tr><td>Region 4</td><td>(Great Falls)</td><td>(406) 454-5840</td><td>fwprg42@mt.gov</td></tr><tr><td>Region 5</td><td>(Billings)</td><td>(406) 247-2940</td><td>fwprg52@mt.gov</td></tr><tr><td>Region 6</td><td>(Glasgow)</td><td>(406) 228-3700</td><td>fwprg62@mt.gov</td></tr><tr><td>Region 7</td><td>(Miles City)</td><td>(406) 234-0900</td><td>fwprg72@mt.gov</td></tr></table>	Region 1	(Kalispell)	(406) 752-5501	fwprg12@mt.gov	Region 2	(Missoula)	(406) 542-5500	fwprg22@mt.gov	Region 3	(Bozeman)	(406) 577-7900	fwprg3@mt.gov	Region 4	(Great Falls)	(406) 454-5840	fwprg42@mt.gov	Region 5	(Billings)	(406) 247-2940	fwprg52@mt.gov	Region 6	(Glasgow)	(406) 228-3700	fwprg62@mt.gov	Region 7	(Miles City)	(406) 234-0900	fwprg72@mt.gov
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Region 3	(Bozeman)	(406) 577-7900	fwprg3@mt.gov																										
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Region 6	(Glasgow)	(406) 228-3700	fwprg62@mt.gov																										
Region 7	(Miles City)	(406) 234-0900	fwprg72@mt.gov																										

Montana Department of Agriculture

General Contact Information: <https://agr.mt.gov/About/Office-Locations/Office-Locations-and-Field-Offices>

Noxious Weeds: <https://agr.mt.gov/Noxious-Weeds>

Montana Department of Environmental Quality

Permitting and Operator Assistance for all Environmental Permits: <https://deq.mt.gov/Permitting>

Montana Department of Natural Resources and Conservation

Overview of, and contacts for, licenses and permits for state lands, water, and forested lands:

<http://dnrc.mt.gov/licenses-and-permits>

Stream Permitting (310 permits) and an overview of various water and stream related permits (e.g., Stream Protection Act 124, Federal Clean Water Act 404, Federal Rivers and Harbors Act Section 10, Short-term Water Quality Standard for Turbidity 318 Authorization, etc.).

<http://dnrc.mt.gov/divisions/cadd/conervation-districts/the-310-law>

Flood and Fire Resources: <http://dnrc.mt.gov/flood-and-fire>

Bureau of Land Management

Montana Field Office Contacts:



Billings	(406) 896-5013
Butte	(406) 533-7600
Dillon	(406) 683-8000
Glasgow	(406) 228-3750
Havre	(406) 262-2820
Lewistown	(406) 538-1900
Malta	(406) 654-5100
Miles City	(406) 233-2800
Missoula	(406) 329-3914

United States Army Corps of Engineers

Montana Regulatory Office for federal permits related to construction in water and wetlands

<https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Montana/> (406) 441-1375

United States Environmental Protection Agency

Environmental information, notices, permitting, and contacts <https://www.epa.gov/mt>

Gateway to state resource locators <https://www.envcap.org/srl/index.php>

United States Fish and Wildlife Service

Information Planning and Conservation (IPAC) website: <https://ecos.fws.gov/ipac/>

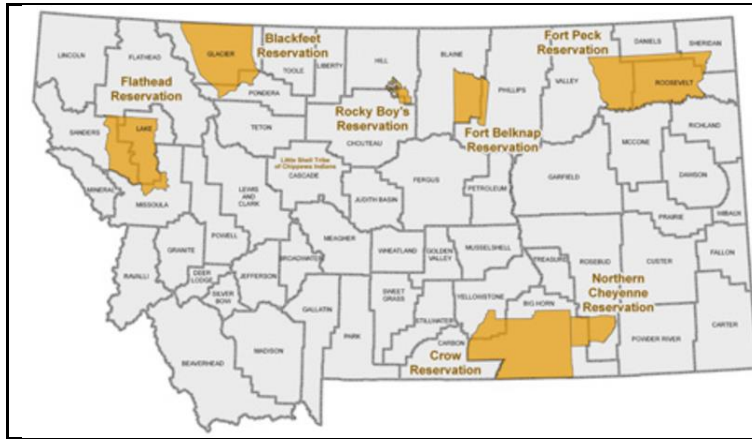
Montana Ecological Services Field Office: <https://www.fws.gov/montanafieldoffice/> (406) 449-5225

United States Forest Service

Regional Office – Missoula, Montana Contacts

Wildlife Program Leader	Tammy Fletcher	tammy.fletcher2@usda.gov	(406) 329-3086
Wildlife Ecologist	Cara Staab	cara.staab@usda.gov	(406) 329-3677
Fish Program Leader	Scott Spaulding	scott.spaulding@usda.gov	(406) 329-3287
Fish Ecologist	Cameron Thomas	cameron.thomas@usda.gov	(406) 329-3087
TES Program	Lydia Allen	lydia.allen@usda.gov	(406) 329-3558
Interagency Grizzly Bear Coordinator	Scott Jackson	scott.jackson@usda.gov	(406) 329-3664
Acting Regional Botanist	Amanda Hendrix	amanda.hendrix@usda.gov	(651) 447-3016
Regional Vegetation Ecologist	Mary Manning	marry.manning@usda.gov	(406) 329-3304
Invasive Species Program Manager	Michelle Cox	michelle.cox2@usda.gov	(406) 329-3669

Tribal Nations



[Assiniboine & Gros Ventre Tribes – Fort Belknap Reservation](#)

[Assiniboine & Sioux Tribes – Fort Peck Reservation](#)

[Blackfeet Tribe - Blackfeet Reservation](#)

[Chippewa Creek Tribe - Rocky Boy's Reservation](#)

[Crow Tribe – Crow Reservation](#)

[Little Shell Chippewa Tribe](#)

[Northern Cheyenne Tribe – Northern Cheyenne Reservation](#)

[Salish & Kootenai Tribes - Flathead Reservation](#)

Natural Heritage Programs and Conservation Data Centers in Surrounding States and Provinces

[Alberta Conservation Information Management System](#)

[British Columbia Conservation Data Centre](#)

[Idaho Natural Heritage Program](#)

[North Dakota Natural Heritage Program](#)

[Saskatchewan Conservation Data Centre](#)

[South Dakota Natural Heritage Program](#)

[Wyoming Natural Diversity Database](#)

Invasive Species Management Contacts and Information

Aquatic Invasive Species

[Montana Fish, Wildlife, and Parks Aquatic Invasive Species staff](#)

[Montana Department of Natural Resources and Conservation's Aquatic Invasive Species Grant Program](#)

[Montana Invasive Species Council \(MISC\)](#)

[Upper Columbia Conservation Commission \(UC3\)](#)

Noxious Weeds

[Montana Weed Control Association Contacts Webpage](#)

[Montana Biological Weed Control Coordination Project](#)

[Montana Department of Agriculture - Noxious Weeds](#)

[Montana Weed Control Association](#)

[Montana Fish, Wildlife, and Parks - Noxious Weeds](#)

[Montana State University Integrated Pest Management Extension](#)

[Integrated Noxious Weed Management after Wildfires](#)

[Fire Management and Invasive Plants](#)

Introduction to Native Species

Within the report area you have requested, separate summaries are provided for: (1) Species Occurrences (SO) for plant and animal Species of Concern, Special Status Species (SSS), Important Animal Habitat (IAH) and some Potential Plant Species of Concern; (2) other observed non Species of Concern or Species of Concern without suitable documentation to create Species Occurrence polygons; and (3) other non-documented species that are potentially present based on their range, predicted suitable habitat model output, or presence of associated habitats. Each of these summaries provides the following information when present for a species: (1) the number of [Species Occurrences](#) and associated delineation criteria for construction of these polygons that have long been used for considerations of documented Species of Concern in environmental reviews; (2) the number of observations of each species; (3) the geographic range polygons for each species that the report area overlaps; (4) predicted relative habitat suitability classes that are present if a predicted suitable habitat model has been created; (5) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the [Montana Field Guide](#); and (6) a variety of conservation status ranks and links to species accounts in the [Montana Field Guide](#). Details on each of these information categories are included under relevant section headers below or are defined on our [Species Status Codes](#) page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document native and introduced species are lacking in many areas of the state, information on introduced species has only been tracked relatively recently, the MTNHP's staff and resources are restricted by budgets, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species and biological communities will always be an important obligation of users of our data.**

If you are aware of observation datasets that the MTNHP is missing, please report them to the Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov. If you have animal observations that you would like to contribute, you can submit them to our [Animal Observation Entry Tool](#). You can also submit plant and animal observations via Excel spreadsheets posted at <https://mtnhp.org/observations.asp> or via the [Montana Natural Heritage Observations project in iNaturalist](#)

Observations

The MTNHP manages information on several million animal and plant observations that have been reported by professional biologists and private citizens from across Montana. The majority of these observations are submitted in digital format from standardized databases associated with research or monitoring efforts and spreadsheets of incidental observations submitted by professional biologists and amateur naturalists. At a minimum, accepted observation records must contain a credible species identification (i.e. appropriate geographic range, date, and habitat and, if species are difficult to identify, a photograph and/or notes on key identifying features), a date or date range, observer name, locational information (ideally with latitude and longitude in decimal degrees), notes on numbers observed, and species behavior or habitat use (e.g., is the observation likely associated with reproduction). Bird records are also required to have information associated with date-appropriate breeding or overwintering status of the species observed. MTNHP reviews observation records to ensure that they are mapped correctly, occur within date ranges when the species is known to be present or detectable, occur within the known seasonal geographic range of the species, and occur in appropriate habitats. MTNHP also assigns each record a locational uncertainty value in meters to indicate the spatial precision associated with the record's mapped coordinates. Only records with locational uncertainty values of 10,000 meters or less are included in environmental summary reports and number summaries are only provided for records with locational uncertainty values of 1,000 meters or less.

Species Occurrences

The MTNHP evaluates plant and animal observation records for species of higher conservation concern to determine whether they are worthy of inclusion in the [Species Occurrence](#) (SO) layer for use in environmental reviews; observations not worthy of inclusion in this layer include long distance dispersal events, migrants observed away from key migratory stopover habitats, and winter observations. An SO is a polygon depicting what is known about a species occupancy from direct observation with a defined level of locational uncertainty and any inference that can be made about adjacent habitat use from the latest peer-reviewed science. If an observation can be associated with a map feature that can be tracked (e.g., a wetland boundary for a wetland associated plant) then this polygon feature is used to represent the SO. Areas that can be inferred as probable occupied habitat based on direct observation of a species location and what is known about the foraging area or home range size of the species may be incorporated into the SO. Species Occurrences generally belong to one of the following categories:

Plant Species Occurrences

A documented location of a specimen collection or observed plant population. In some instances, adjacent, spatially separated clusters are considered subpopulations and are grouped as one occurrence (e.g., the subpopulations occur in ecologically similar habitats, and their spatial proximity likely allows them to interbreed). Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Plant SO's are only created for Species of Concern and Potential Species of Concern.

Animal Species Occurrences

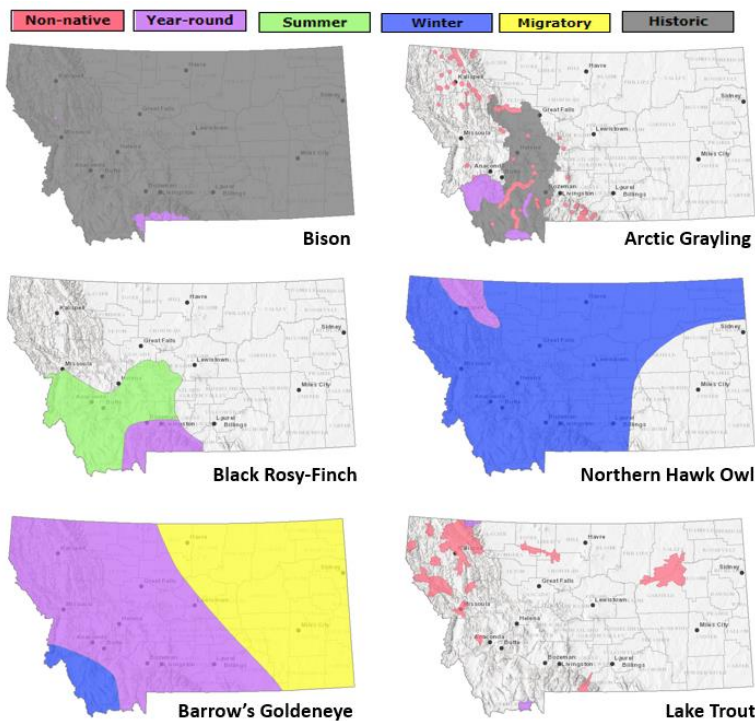
The location of a verified observation or specimen record typically known or assumed to represent a breeding population or a portion of a breeding population. Animal SO's are generally: (1) buffers of terrestrial point observations based on documented species' home range sizes; (2) buffers of stream segments to encompass occupied streams and immediate adjacent riparian habitats; (3) polygonal features encompassing known or likely breeding populations (e.g., a wetland for some amphibians or a forested portion of a mountain range for some wide ranging carnivores); or (4) combinations of the above. Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Species Occurrence polygons may encompass some unsuitable habitat in some instances in order to avoid heavy data processing associated with clipping out habitats that are readily assessed as unsuitable by the data user (e.g., a point buffer of a terrestrial species may overlap into a portion of a lake that is obviously inappropriate habitat for the species). Animal SO's are only created for Species of Concern and Special Status Species (e.g., Bald Eagle).

Other Occurrence Polygons

These include significant biological features not included in the above categories, such as Important Animal Habitats like bird rookeries and bat roosts, and peatlands or other wetland and riparian communities that support diverse plant and animal communities.

Geographic Range Polygons

Geographic range polygons are still under development for most plant and invertebrate species. Native year-round, summer, winter, migratory and historic geographic range polygons as well as polygons for introduced



populations have been defined for most vertebrate animal species for which there are enough observations, surveys, and knowledge of appropriate seasonal habitat use to define them (see examples to left). These native or introduced range polygons bound the extent of known or likely occupied habitats for non-migratory and relative sedentary species and the regular extent of known or likely occupied habitats for migratory and long-distance dispersing species; polygons may include unsuitable intervening habitats. For most species, a single polygon can represent the year-round or seasonal range, but breeding ranges of some colonial nesting water birds and some introduced species are represented more patchily when supported by data. Some ranges are mapped more broadly than actual distributions in order to be visible on statewide maps (e.g., fish).

Predicted Suitable Habitat Models

Predicted habitat suitability models have been created for plant and animal Species of Concern and are undergoing development for non-Species of Concern. For species for which models have been completed, the environmental summary report includes simple rule-based associations with streams for aquatic species and seasonal habitats for game species as well as mathematically complex Maximum Entropy models (Phillips et al. 2006, Ecological Modeling 190:231-259) constructed from a variety of statewide biotic and abiotic layers and presence only data for individual species for most terrestrial species. For the Maximum Entropy models, we reclassified 90 x 90-meter continuous model output into suitability classes (unsuitable, low, moderate, and optimal) then aggregated that into the one square mile hexagons used in the environmental summary report; this is the finest spatial scale we suggest using this information in management decisions and survey planning. Full model write ups for individual species that discuss model goals, inputs, outputs, and evaluation in much greater detail are posted on the MTNHP's [Predicted Suitable Habitat Models](#) webpage. Evaluations of predictive accuracy and specific limitations are included with the metadata for models of individual species. **Model outputs should not be used in place of on-the-ground surveys for species. Instead model outputs should be used in conjunction with habitat evaluations to determine the need for on-the-ground surveys for species.** We suggest that the percentage of predicted optimal and moderate suitable habitat within the report area be used in conjunction with geographic range polygons and the percentage of commonly associated habitats to generate lists of potential species that may occupy broader landscapes for the purposes of landscape-level planning.

Associated Habitats

Within the boundary of the intersected hexagons, we provide the approximate percentage of commonly or occasionally associated habitat for vertebrate animal species that regularly breed, overwinter, or migrate through the state; a detailed list of commonly and occasionally associated habitats is provided in individual species accounts in the [Montana Field Guide](#). We assigned common or occasional use of each of the ecological

systems mapped in Montana by: (1) using personal knowledge and reviewing literature that summarizes the breeding, overwintering, or migratory habitat requirements of each species; (2) evaluating structural characteristics and distribution of each ecological system relative to the species' range and habitat requirements; (3) examining the observation records for each species in the state-wide point observation database associated with each ecological system; and (4) calculating the percentage of observations associated with each ecological system relative to the percent of Montana covered by each ecological system to get a measure of numbers of observations versus availability of habitat. Species that breed in Montana were only evaluated for breeding habitat use, species that only overwinter in Montana were only evaluated for overwintering habitat use, and species that only migrate through Montana were only evaluated for migratory habitat use. In general, species were listed as associated with an ecological system if structural characteristics of used habitat documented in the literature were present in the ecological system or large numbers of point observations were associated with the ecological system. However, species were not listed as associated with an ecological system if there was no support in the literature for use of structural characteristics in an ecological system, even if point observations were associated with that system. Common versus occasional association with an ecological system was assigned based on the degree to which the structural characteristics of an ecological system matched the preferred structural habitat characteristics for each species as represented in the scientific literature. The percentage of observations associated with each ecological system relative to the percent of Montana covered by each ecological system was also used to guide assignment of common versus occasional association.

We suggest that the percentage of commonly associated habitat within the report area be used in conjunction with geographic range polygons and the percentage of predicted optimal and moderate suitable habitat from predictive models to generate lists of potential species that may occupy broader landscapes for the purposes of landscape-level planning. Users of this information should be aware that land cover mapping accuracy is particularly problematic when the systems occur as small patches or where the land cover types have been altered over the past decade. Thus, particular caution should be used when using the associations in assessments of smaller areas (e.g., evaluations of public land survey sections).

Introduction to Land Cover

Land Use/Land Cover is one of 15 [Montana Spatial Data Infrastructure](#) framework layers considered vital for making statewide maps of Montana and understanding its geography. The layer records all Montana natural vegetation, land cover and land use, classified from satellite and aerial imagery, mapped at a scale of 1:100,000, and interpreted with supporting ground-level data. The baseline map is adapted from the Northwest ReGAP (NWGAP) project land cover classification, which used 30m resolution multi-spectral Landsat imagery acquired between 1999 and 2001. Vegetation classes were drawn from the Ecological System Classification developed by NatureServe (Comer et al. 2003). The land cover classes were developed by Anderson et al. (1976). The NWGAP effort encompasses 12 map zones. Montana overlaps seven of these zones. The two NWGAP teams responsible for the initial land cover mapping effort in Montana were Sanborn and NWGAP at the University of Idaho. Both Sanborn and NWGAP employed a similar modeling approach in which Classification and Regression Tree (CART) models were applied to Landsat ETM+ scenes. The Spatial Analysis Lab within the Montana Natural Heritage Program was responsible for developing a seamless Montana land cover map with a consistent statewide legend from these two separate products. Additionally, the Montana land cover layer incorporates several other land cover and land use products (e.g., MSDI Structures and Transportation themes and the Montana Department of Revenue Final Land Unit classification) and reclassifications based on plot-level data and the latest NAIP imagery to improve accuracy and enhance the usability of the theme. Updates are done as partner support and funding allow, or when other MSDI datasets can be incorporated. Recent updates include fire perimeters and agricultural land use (annually), energy developments such as wind, oil and gas installations (2014), roads, structures and other impervious surfaces (various years): and local updates/improvements to specific ecological systems (e.g., central Montana grassland and sagebrush ecosystems). Current and previous versions of the Land Use/Land Cover layer with full metadata are available for download at the Montana State Library's [Geographic Information Clearinghouse](#)

Within the report area you have requested, land cover is summarized by acres of Level 1, Level 2, and Level 3 Ecological Systems.

Literature Cited

- Anderson, J.R. E.E. Hardy, J.T. Roach, and R.E. Witmer. 1976. A land use and land cover classification system for use with remote sensor data. U.S. Geological Survey Professional Paper 964.
- Comer, P., D. Faber-Langendoen, R. Evans, S. Gawler, C. Josse, G. Kittel, S. Menard, M. Pyne, M. Reid, K. Schulz, K. Snow, and J. Teague. 2003. Ecological systems of the United States: A working classification of U.S. terrestrial systems. NatureServe, Arlington, VA.

Introduction to Wetland and Riparian

Within the report area you have requested, wetland and riparian mapping is summarized by acres of each classification present. Summaries are only provided for modern MTNHP wetland and riparian mapping and not for outdated (NWI Legacy) or incomplete (NWI Scalable) mapping efforts; [described here](#). MTNHP has made all three of these datasets and associated metadata available for separate download on the Montana [Wetland and Riparian Framework](#) web page.

Wetland and Riparian mapping is one of 15 [Montana Spatial Data Infrastructure](#) framework layers considered vital for making statewide maps of Montana and understanding its geography. The wetland and riparian framework layer consists of spatial data representing the extent, type, and approximate location of wetlands, riparian areas, and deep water habitats in Montana.

Wetland and riparian mapping is completed through photointerpretation of 1-m resolution color infrared aerial imagery acquired from 2005 or later. A coding convention using letters and numbers is assigned to each mapped wetland. These letters and numbers describe the broad landscape context of the wetland, its vegetation type, its water regime, and the kind of alterations that may have occurred. Ancillary data layers such as topographic maps, digital elevation models, soils data, and other aerial imagery sources are also used to improve mapping accuracy. Wetland mapping follows the federal Wetland Mapping Standard and classifies wetlands according to the Cowardin classification system of the National Wetlands Inventory (NWI) (Cowardin et al. 1979, FGDC Wetlands Subcommittee 2013). Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands differently than the NWI. Similar coding, based on U.S. Fish and Wildlife Service conventions, is applied to riparian areas (U.S. Fish and Wildlife Service 2009). These are mapped areas where vegetation composition and growth is influenced by nearby water bodies, but where soils, plant communities, and hydrology do not display true wetland characteristics. **These data are intended for use at a scale of 1:12,000 or smaller. Mapped wetland and riparian areas do not represent precise boundaries and digital wetland data cannot substitute for an on-site determination of jurisdictional wetlands.**

See a detailed overview, with examples, of both [wetland and riparian classification systems and associated codes](#)

Literature Cited

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79/31. Washington, D.C. 103pp.
- Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, D.C.
- U.S. Fish and Wildlife Services. 2009. A system for mapping riparian areas in the western United States. Division of Habitat and Resource Conservation, Branch of Resource and Mapping Support, Arlington, Virginia.

Introduction to Land Management

Within the report area you have requested, land management information is summarized by acres of federal, state, and local government lands, tribal reservation boundaries, private conservation lands, and federal, state, local, and private conservation easements. Acreage for “Owned”, “Tribal”, or “Easement” categories represents non-overlapping areas that may be totaled. However, “Other Boundaries” represents managed areas such as National Forest boundaries containing private inholdings and other mixed ownership which may cause boundaries to overlap (e.g. a wilderness area within a forest). Therefore, acreages may not total in a straight-forward manner.

Because information on land stewardship is critical to effective land management, the Montana Natural Heritage Program (MTNHP) began compiling ownership and management data in 1997. The goal of the Montana Land Management Database is to manage a single, statewide digital data set that incorporates information from both public and private entities. The database assembles information on public lands, private conservation lands, and conservation easements held by state and federal agencies and land trusts and is updated on a regular basis. Since 2011, the Information Management group in the Montana State Library’s Digital Library Division has led the Montana Land Management Database in partnership with the MTNHP.

Public and private conservation land polygons are attributed with the name of the entity that owns it. The data are derived from the statewide [Montana Cadastral Parcel layer](#). Conservation easement data shows land parcels on which a public agency or qualified land trust has placed a conservation easement in cooperation with the land owner. The dataset contains no information about ownership or status of the mineral estate. For questions about the dataset or to report errors, please contact the Montana Natural Heritage Program at (406) 444-5363 or mtnhp@mt.gov. You can download various components of the Land Management Database and view associated metadata at the Montana State Library’s [GIS Data List](#) at the following links:

[Public Lands](#)

[Conservation Easements](#)

[Private Conservation Lands](#)

[Managed Areas](#)

Map features in the Montana Land Management Database or summaries provided in this report are not intended as a legal depiction of public or private surface land ownership boundaries and should not be used in place of a survey conducted by a licensed land surveyor. Similarly, map features do not imply public access to any lands. The Montana Natural Heritage Program makes no representations or warranties whatsoever with respect to the accuracy or completeness of this data and assumes no responsibility for the suitability of the data for a particular purpose. The Montana Natural Heritage Program will not be liable for any damages incurred as a result of errors displayed here. Consumers of this information should review or consult the primary data and information sources to ascertain the viability of the information for their purposes.

Introduction to Invasive and Pest Species

Within the report area you have requested, separate summaries are provided for: Aquatic Invasive Species, Noxious Weeds, Agricultural Pests, Forest Pests, and Biocontrol species that have been documented or potentially occur there based on the predicted suitability of habitat. Definitions for each of these invasive and pest species categories can be found on our [Species Status Codes](#) page.

Each of these summaries provides the following information when present for a species: (1) the number of observations of each species; (2) the geographic range polygons for each species, if developed, that the report area overlaps; (3) predicted relative habitat suitability classes that are present if a predicted suitable habitat model has been created; (4) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the [Montana Field Guide](#); and (5) links to species accounts in the [Montana Field Guide](#). Details on each of these information categories are included under relevant section headers under the Introduction to Native Species above or are defined on our [Species Status Codes](#) page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what invasive and pest species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document introduced species are lacking in many areas of the state, information on introduced species has only been tracked relatively recently, the MTNHP's staff and resources are limited, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species will always be an important obligation of users of our data.**

If you are aware of observation or survey datasets for invasive or pest species that the MTNHP is missing, please report them to the Program Coordinator bmaxell@mt.gov Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov. If you have observations that you would like to contribute, you can submit animal observations using our online data entry system at mtnhp.org/AddObs or via Excel spreadsheets posted at mtnhp.org/observations.asp

Additional Information Resources

[MTNHP Staff Contact Information](#)

[Montana Field Guide](#)

[MTNHP Species of Concern Report - Animals and Plants](#)

[MTNHP Species Status Codes - Explanation](#)

[MTNHP Predicted Suitable Habitat Models](#) (for select Animals and Plants)

[MTNHP Request Information page](#)

[Montana Cadastral](#)

[Montana Code Annotated](#)

[Montana Fisheries Information System](#)

[Montana Fish, Wildlife, and Parks Subdivision Recommendations](#)

[Montana GIS Data Layers](#)

[Montana GIS Data Bundler](#)

[Montana Greater Sage-Grouse Project Submittal Site](#)

[Montana Ground Water Information Center](#)

[Montana Index of Environmental Permits, 21st Edition \(2018\)](#)

[Montana Environmental Policy Act \(MEPA\)](#)

[Montana Environmental Policy Act Analysis Resource List](#)

[Laws, Treaties, Regulations, and Agreements on Animals and Plants](#)

[Montana Spatial Data Infrastructure Layers](#)

[Montana State Historic Preservation Office Review and Compliance](#)

[Montana Stream Permitting: a guide for conservation district supervisors and others](#)

[Montana Water Information System](#)

[Montana Web Map Services](#)

[National Environmental Policy Act](#)

[Penalties for Misuse of Fish and Wildlife Location Data](#) (MCA 87-6-222)

[U.S. Fish and Wildlife Service Information for Planning and Consultation](#) (Section 7 Consultation)

[Web Soil Survey Tool](#)

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Blaine County, Montana



Local office

Montana Ecological Services Field Office

☎ (406) 449-5225

📅 (406) 449-5339

585 Shephard Way, Suite 1

Helena, MT 59601-6287

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Baird's Sparrow <i>Ammodramus bairdii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5113	Breeds May 20 to Aug 15
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31

Chestnut-collared Longspur *Calcarius ornatus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Aug 10

Franklin's Gull *Leucophaeus pipixcan*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Jul 31

Lesser Yellowlegs *Tringa flavipes*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Breeds elsewhere

Long-billed Curlew *Numenius americanus*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/5511>

Breeds Apr 1 to Jul 31

Marbled Godwit *Limosa fedoa*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9481>

Breeds May 1 to Jul 31

Sprague's Pipit *Anthus spragueii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8964>

Breeds May 10 to Aug 31

Willet *Tringa semipalmata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 20 to Aug 5

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

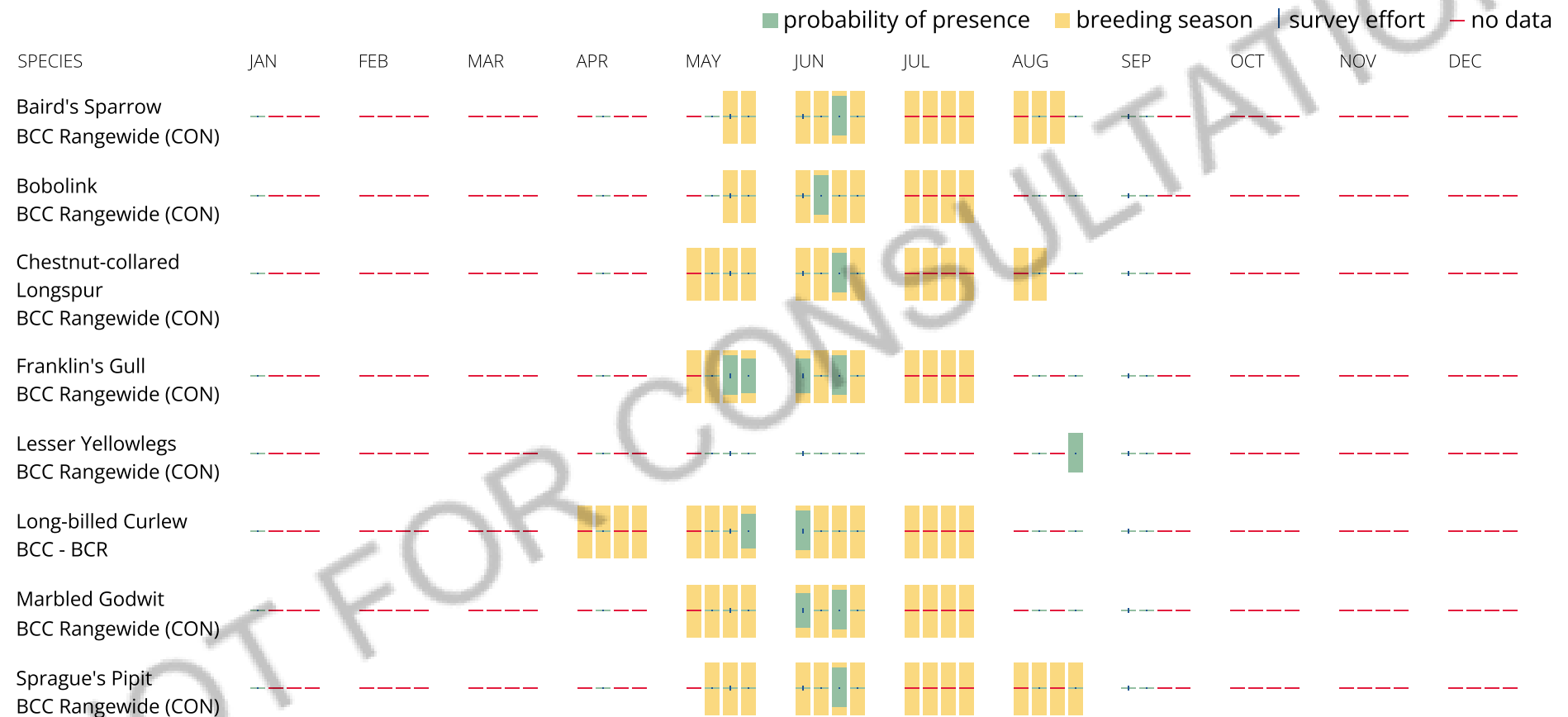
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Willet
BCC Rangewide (CON)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

[R2UBG](#)

[R4SBCx](#)

[R5UBH](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

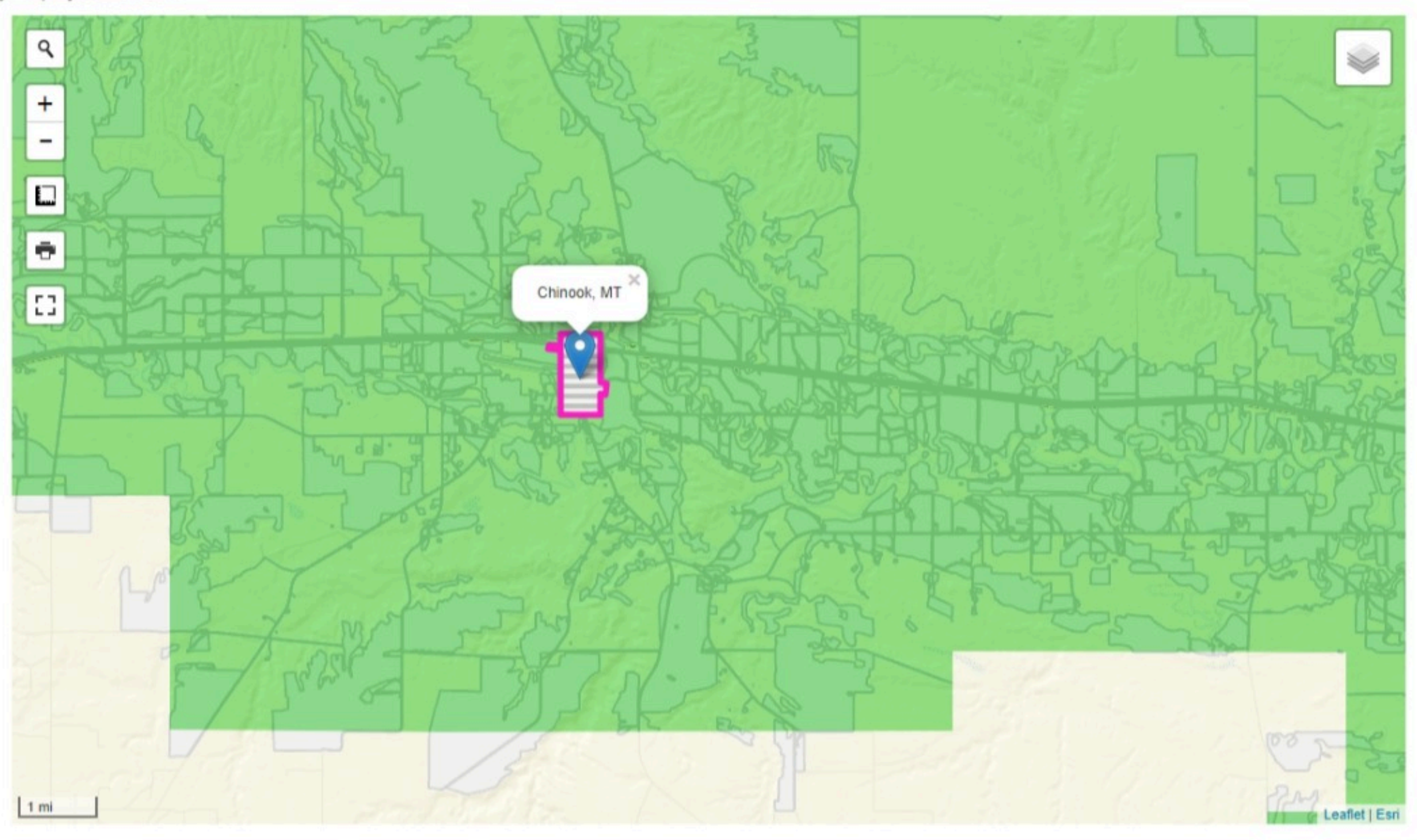


Photo Credit: Richard Producers

Montana Sage Grouse Habitat Conservation Map


Use this map to view and explore types of sage grouse habitat designated as core (blue), general (green), connectivity (light-blue) habitats or BLM priority areas. To zoom into an area, hold the Shift key and draw a rectangle. Anyone proposing new development activities in sage grouse habitat must [submit a development project application](#) for consultation.

If your project is close to designated sage grouse habitat or BLM Priority area, or if you are unsure your project is within designated sage grouse habitat or BLM Priority area, please submit your project for review as permitting agencies will be checking to see if your project is located within these designated sage grouse habitats. If your permitting agency requires evidence that your project is outside of designated sage grouse habitat, we recommend that you [log in](#) and start a project application and take a screenshot of your project's location.




MONTANA SAGE GROUSE HABITAT CONSERVATION PROGRAM
1539 ELEVENTH AVE. HELENA, MT 59601 | SAGEGROUSE@MT.GOV | 406-444-6340

Montana State Wildlife Action Plan (SWAP) - Terrestrial Focal Areas



Montana Fish, Wildlife and Parks

Private Organization 


Summary

To assist in the delineation of priority terrestrial habitats and communities for the Montana SWAP.

View Full Details

Download

Details




Dataset

Feature Layer




As Needed

Info Updated: September 23, 2022



Not Planned

Data Updated: September 23, 2022




January 16, 2018

Published Date



116 Records

[View data table](#)



Public

Anyone can see this content



Custom License

[View license details](#)

116 records

48.57443, -109.067919



FOCALAREANAME: Milk River

Montana State Wildlife Action Plan (SWAP) - Terrestrial Focal Areas


OBJECTID	194
FOCALAREANAME	Milk River
TIER	1
RELATE_ID	366
REGION	6
PRIORITY	2
NUMBER_	28
WEBLINK	https://myfwp.mt.gov/getRepositoryFile?objectID=70173
Shape__Area	7,954,783,885.719
Shape__Length	2,375,352.821

Zoom to


2 of 2



Montana State Wildlife Action Plan (SWAP) - Aquatic Focal Areas (Watersheds)



Montana Fish, Wildlife and Parks

Private Organization 








Summary

To assist in the delineation of priority aquatic habitats for the Montana SWAP.

View Full Details






Download

Details



-  **Dataset**
Feature Layer
-  **As Needed**
Info Updated: September 23, 2022
-  **Not Planned**
Data Updated: September 23, 2022
-  **January 23, 2016**
Published Date
-  **250 Records**
[View data table](#)
-  **Public**
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









250 records

FOCALAREANAME: Battle Creek




48.57443, -109.067919





Montana State Wildlife Action Plan (SWAP) - Aquatic Focal Areas (Watersheds)

OBJECTID	494
FOCALAREANAME	Milk River
TIER	1
RELATE_ID	1,789
REGION	6
PRIORITY	1
NUMBER_	48
WEBLINK	https://myfwp.mt.gov/getRepositoryFile?objectID=70172

 Zoom to

I want to use this

Bureau of Land Management, Esri, HERE, Garmin, USGS, EPA, NPS | Esri, HERE, NPS

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